COYOTE CREEK FLOOD CONTROL PROJECT

SAN FRANCISCO BAY TO MONTAGUE EXPRESSWAY

SUBMITTAL FOR FEMA'S LETTER OF MAP REVISION

BY SANTA CLARA VALLEY WATER DISTRICT

SAN JOSE, CALIFORNIA

7/25/95

TC425C69C691995c.1

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2. FEMA LOMR forms 1, 2, 4, 5, 6, & 8 with attachments for Interior Drainage Study and slope stability analyses
3. Cyote Creek Stationing Reference Tables
4. Effective FIS HEC-2 model input and output printouts
5. Coyote Creek post project HEC-2 files input and output printouts
6. HEC-2 files summary and floppy disk

Attachments:

- a. Coyote Creek 1 INCH = 500 FEET scale FIRM maps (Revised post construction zoning)
- b. Coyote Creek 1 inch = 500 feet scale County of Santa Clara maps (for Interior Drainage Study)
- c. Coyote Creek 1 inch = 1000 feet scale map (project reaches, FEMA stationings, & flood zone delineation)
- e. Coyote Creek as-built plans and construction plans for Reaches 1, 2A, 2B, 3A, and 3B.

SANTA CLARA VALLEY WATER DISTRICT
LIBRARY
5750 ALMADEN EXPRESSWAY
SAN JOSE, CALIFORNIA 95118

Cover Letter

Santa Clara Valley Water District

5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686
TELEPHONE (408) 265-2600
FACSIMILE (408) 266-0271

AN AFFIRMATIVE ACTION EMPLOYER

July 25, 1995

Mr. John Matticks
Risk Studies Division
Federal Insurance Administration
Federal Emergency Management Agency
500 "C" Street SW
Washington, DC 20472

Dear Mr. Matticks:

Subject: Coyote Creek Flood Control Project—Letter of Map Revision Request

This is a request for a Letter of Map Revision for the Coyote Creek Flood Control Project from the San Francisco Bay to Montague Expressway in the cities of Milpitas and San Jose, California. The Santa Clara Valley Water District has completed construction of improvement between San Francisco Bay and Highway 237, while the remaining channel improvements between Highway 237 and Montague Expressway are currently under construction. Construction is scheduled to be completed in November 1995. The channel improvements consist of construction of earthen levees, an excavated bypass channel, rock riprap slope protection, and a concrete-lined channel beneath the Highway 237 bridge. Project levees now contain the 1 percent flood discharge within the channel, so there are no longer overflows to the east or west of Coyote Creek downstream of Montague Expressway. A copy of the currently effective Flood Insurance Rate Maps (FIRM) and a 1 inch = 1,000 feet scale aerial map are enclosed which are marked to show the area protected from flooding by the channel improvement project.

To assist you in your review of the project, we have enclosed:

1. Completed Federal Emergency Management Agency (FEMA) Forms 1, 2, 4, 5, 6, and 8.

2. As-built construction plans and construction plans for channel improvements to Coyote Creek. These plans are in five reaches of construction.

a.	Reach I :	Between Leslie Salt Pond and Milpitas Sewage Treatment Plant
b.	Reach IIA:	Between Milpitas Sewage Treatment Plant and 3,500 feet downstream of Highway 237
c.	Reach IIB:	Between 3,500 feet downstream of Highway 237 and Highway 237
d.	Reach IIIA:	Between Highway 237 and Tasman Drive
e.	Reach IIIB:	Between Tasman Drive and downstream of Montague Expressway

3. Printed input and output and IBM compatible floppy disk indicating hydraulic modeling of the projects. These models incorporate the FEMA stationing to assist your review.

COYA.DAT:	Input file between Southern Pacific Railroad (SPRR) and beginning bypass channel
COYA.OUT:	Output file between SPRR and beginning bypass channel
COY1A.DAT:	Reach IA input file
COY1A.OUT:	Reach IA output file
COY1B.DAT:	Reach IB input file
COY1B.OUT:	Reach IB output file
COY2A.DAT:	Reach IIA input file
COY2A.OUT:	Reach IIA output file
COY2B.DAT:	Reach IIB input file
COY2BOUT:	Reach IIB output file
COY3A.DAT:	Reach IIIA input file (Highway 237 to bypass channel)
COY3A.OUT:	Reach IIIA output file (Highway 237 to bypass channel)
COY3BP.DAT:	Reach IIIA and IIIB input file (bypass channel run)
COY3BP.OUT:	Reach IIIA and IIIB output file (bypass channel run)
COY3CH.DAT:	Reach IIIA and IIIB input file (channel run)
COY3CH.OUT:	Reach IIIA and IIIB output file (channel run)
COY3E.DAT:	Reach IIIB input file (bypass channel to downstream of Montague Expressway)
COY3E.OUT:	Reach IIIB output file (bypass channel to downstream of Montague Expressway)

4. Printed input and output and IBM compatible floppy disk indicating the HEC-2 hydraulic modeling prior to the projects which was prepared for the flood insurance study (FIS).

COY2.DAT:	FIS effective model input (Lower Penitencia to Brokaw Road)
COY2.OUT:	FIS effective model output

5. Printed input and output and IBM compatible floppy disk indicating HEC-2 hydraulic modeling for both preproject and postproject on Guadalupe River and Coyote Creek for the Interior Drainage Study.

POST1.DAT.OUT:	Postproject
POST2.*	
POST3.*	
GUAD06 .OUT:	Duplicate Effective FIS of Guadalupe River
NSJ1A50 .OUT:	Preproject (Nolte Study)
NSJ1B50	
NSJ1C50	

6. Working drawings (1 inch = 1,000 feet scale map and the currently effective 1 inch = 500 feet scale FIRM maps) which have been marked to show which flows are now contained within the improved channel.

7. Working drawings (1 inch = 500 feet scale County of Santa Clara maps) which have been marked to delineate the residual floodplain due to interior drainage system being unable to discharge during

the 100-year event. An interior drainage study was prepared and its study results are included in the FEMA forms enclosed.

An exemption from your fee requirement is requested in accordance with Section 72.5 of the National Flood Insurance Program Regulations because this project is for public benefit and is primarily intended for flood loss reduction to existing development in an identified flood hazard area.

If you have any questions regarding this project, please call Mr. Eric Tsou, the project engineer, at the Camden Office, (408) 927-0710, extension 2690.

Sincerely,

For Nai Hsueh
Supervising Engineer
Flood Control Design Division

Enclosures

cc: Mr. Tom Fletcher
Public Works Department
City of San Jose
801 North First Street, Room 300
San Jose, CA 95110

Mr. Joe McCarthy
The McCarthy Ranch
P.O. Box 321256
Milpitas, CA 95035-1256

Mr. Sam Zullo
Mark Thomas Associates
90 Archer Street
San Jose, CA 95112

Mr. Mike McNeely
Public Works Department
City of Milpitas
455 East Calaveras Boulevard
Milpitas, CA 95035

Mr. Ken Myers
Army Corps of Engineers
1325 J Street
Sacramento, CA 95814-2922

FEMA FORMS

FEDERAL EMERGENCY MANAGEMENT AGENCY
REVISION REQUESTOR AND COMMUNITY OFFICIAL FORM

O.M.B. Burden No 3067-0148
Expires July 31, 1994

FEMA USE ONLY

PUBLIC BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 2.13 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden, to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

1. OVERVIEW

1. The basis for this revision request is (are): *(check all that apply)*

- ☒ Physical change
  - ☒ Existing
  - ☐ Proposed
- ☐ Improved methodology
- ☒ Improved data
- ☐ Floodway revision
- ☒ Other NEW PUMP STATIONS

Explain ELIMINATION OF INTERIOR AREAS FROM DESIGNATED FLOODPLAIN

2. Flooding Source: COYOTE CREEK AND GUADALUPE RIVER

3. Project Name/Identifier: COYOTE CREEK FLOOD CONTROL PROJECT

4. FEMA zone designations affected: A, AO, AH
(example: A, AH, AO, A1-A30, A99, AE, V, V1-30, VE, B, C, D, X)

5. The NFIP map panel(s) affected for all impacted communities is (are):

Community No.	Community Name	County	State	Map No.	Panel No.	Effective Date
EX: 480301	Katy,City	Harris, Fort Bend	TX	480301	0005D	02/08/83
480287	Harris County	Harris	TX	48201C	0220G	09/28/90
060344	MILPITAS, CITY	SANTA CLARA	CA	060344	0001,0003E	07/04/88 02/19/86
060349	SAN JOSE, CITY	SANTA CLARA	CA	060349	1006,0009 0008,13,14E	12/16/88 02/19/86
060337	SANTA CLARA CO	SANTA CLARA	CA	060337	0060,65,70E	02/19/86
060337	SANTA CLARA CO	SANTA CLARA	CA	060337	0235D	08/02/82

6. The area of revision encompasses the following types of flooding, structures, and associated disciplines: *(check all that apply)*

Types of Flooding

- ☒ Riverine
- ☐ Coastal
- ☐ Alluvial Fan
- ☒ Shallow Flooding *(e.g. Zones AO and AH)*
- ☐ Lakes

Affected by wind/wave action

- ☐ Yes
- ☒ No

Structures

- ☐ Channelization
- ☒ Levee/Floodwall
- ☐ Bridge/Culvert
- ☐ Dam
- ☐ Coastal
- ☐ Fill
- ☒ Pump Station
- ☐ None
- ☐ Channel Relocation
- ☐ Excavation
- ☐ Other *(describe)*

Disciplines*

- ☒ Water Resources
  - ☒ Hydrology
  - ☒ Hydraulics
  - ☐ Sediment Transport
  - ☒ Interior Drainage
- ☒ Structural
- ☐ Geotechnical
- ☐ Land Surveying
- ☐ Other *(describe)*

☐ Other(describe)

* **Attach completed "Certification by Registered Professional Engineer and/or Land Surveyor" Form for each discipline checked. (Form 2)**

2. FLOODWAY INFORMATION

7. Does the affected flooding source have a floodway designated on the effective FIRM or FBFM? ☐ Yes ☒ No

8. Does the revised floodway delineation differ from that shown on the effective FIRM or FBFM? ☐ Yes ☒ No

Attach copy of either a public notice distributed by the community stating the community's intent to revise the floodway or a statement by the community that it has notified all affected property owners and affected adjacent jurisdictions.

9. Does the State have jurisdiction over the floodway or its adoption by communities participating in the NFIP? ☐ Yes ☒ No

If yes, attach a copy of a letter notifying the appropriate State agency of the floodway revision and documentation of the approval of the revised floodway by the appropriate State agency.

3. PROPOSED ENCROACHMENTS

10. With floodways: N/A

1A. Does the revision request involve fill, new construction, substantial improvement, or other development in the floodway? ☐ Yes ☐ No

1B. If yes, does the development cause the 100-year water surface elevation to increase at any location by more than 0.000 feet? ☐ Yes ☐ No

11. Without floodways:

2A. Does the revision request involve fill, new construction, substantial improvement, or other development in the 100-year floodplain? ☒ Yes ☐ No

2B. If yes, does the cumulative effect of all development that has occurred since the effective SFHA was originally identified cause the 100-year water surface elevation to increase at any location by more than one foot (*or other surcharge limit if community or state has adopted more stringent criteria*)? ☐ Yes ☒ No

If the answer to either Items 1B or 2B is yes, please provide documentation that all requirements of Section 65.12 of the NFIP regulations have been met, regarding evaluation of alternatives, notice to individual legal property owners, concurrence of CEO, and certification that no insurable structures are impacted.

4. REVISION REQUESTOR ACKNOWLEDGMENT

12. Having read NFIP Regulations, 44 CFR Ch. I, parts 59, 60, 61, and 72, I believe that the proposed revision ☒ is ☐ is not in compliance with the requirements of the aforementioned NFIP Regulations.

5. COMMUNITY OFFICIAL ACKNOWLEDGMENT

13. Was this revision request reviewed by the community for compliance with the community's adopted floodplain management ordinances? ☒ Yes ☐ No

14. Does this revision request have the endorsement of the community? ☒ Yes ☐ No

If no to either of the above questions, please explain: ______________________

Please note that community acknowledgment and /or notification is required for all requests as outlined in Section 65.4 (b) of the NFIP Regulations.

6. OPERATION AND MAINTENANCE

15. Does the physical change involve a flood control structure (e.g., levees, floodwalls, channelization, basins, dams)? ☒ Yes ☐ No

If yes, please provide the following information for each of the new flood control structures:

A. Inspection of the flood control project will be conducted periodically by SANTA CLARA VALLEY WATER DISTRICT (entity) with a maximum interval of 12 months between inspections.

B. Based on the results of scheduled periodic inspections, appropriate maintenance of the flood control facilities will be conducted by SANTA CLARA VALLEY WATER DISTRICT (entity) to ensure the integrity and degree of flood protection of the structure.

C. A formal plan of operation, including documentation of the flood warning system, specific actions and assignments of responsibility by individual name or title, and provisions for testing the plan at intervals ☐ has not been prepared for the flood control structure.

D. The community is willing to assume responsibility for ☐ performing ☒ overseeing compliance with the maintenance and operation plans of the COYOTE CREEK FLOOD CONTROL PROJECT
(Name)
flood control structure. If not performed promptly by an owner other than the community, the community will provide the necessary services without cost to the Federal government.

Attach operation and maintenance plans ATTACHED

7. REQUESTED RESPONSE FROM FEMA

16. After examining the pertinent NFIP regulations and reviewing the document entitled "Appeals, Revisions, and Amendments to Flood Insurance Maps: A guide for Community Officials," dated January 1990, this request is for a:

______a.	CLOMR	A letter from FEMA commenting on whether a proposed project, if built as proposed, would justify a map revision *(LOMR or PMR)*, or proposed hydrology changes *(see 44 CFR Ch. I, Parts 60, 65, and 72)*.
__X__b.	LOMR	A letter from FEMA officially revising the current NFIP map to show changes to floodplains, floodways, or flood elevations. LOMRs typically depict decreased flood hazards. *(See 44 CFR Ch. I Parts 60 and 65.)*
______c.	PMR	A reprinted NFIP map incorporating changes to floodplains, floodways, or flood elevations. Because of the time and cost involved to change, reprint, and redistribute an NFIP map, a PMR is usually processed when a revision reflects increased flood hazards or large-scope changes. *(See 44 CFR Ch. I, Parts 60 and 65.)*
______d.	Other:	Describe______________________________

8. FORMS INCLUDED

17. Form 2 entitled, "Certification By Registered Professional Engineer and/or Land Surveyor" must be submitted.

The following forms should be included with this request if (check the included forms):

• Hydrologic analysis for flooding source differs from that used to develop FIRM	☐ Hydrologic Analysis Form (Form 3)
• Hydraulic analysis for riverine flooding differs from that used to develop FIRM	☒ Riverine Hydraulic Analysis Form (Form 4)
• The request is based on updated topographic information or a revised floodplain or floodway delineation is requested	☒ Riverine /Coastal Mapping Form (Form 5)
• The request involves any type of channel modification	☒ Channelization Form (Form 6)
• The request involves new bridge or culvert or revised analysis of an existing bridge or culvert	☐ Bridge/Culvert Form (Form 7)
• The request involves a new revised levee/floodwall system	☒ Levee/Floodwall System Analysis Form (Form 8)
• The request involves analysis of coastal flooding	☐ Coastal Analysis Form (Form 9)
• The request involves coastal structures credited as providing protection from the 100-year flood	☐ Coastal Structures (Form 10)
• The request involves an existing, proposed, or modified dam	☐ Dam Form (Form 11)
The request involves structures credited as providing protection from the 100-year flood on an alluvial fan	☐ Alluvial Fan Flooding Form (Form 12)

9. INITIAL REVIEW FEE

18. The minimum initial review fee for the appropriate request category has been included. ☐ Yes ☐ No

Initial fee amount: $ ____________

METHOD OF PAYMENT (Check one box)

☐ **PAYMENT ENCLOSED** ☐ VISA ☐ MASTERCARD

Check or money order only.
Make payable to
National Flood Insurance Program

CARD NUMBER

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

EXP. Date ☐☐☐☐

Signature

or

19. This request is for a project that is for public benefit and is intended to reduce the flood hazard to existing development in identified flood hazard areas as opposed to planned floodplain development. ☒ Yes ☐ No

or

20. This request is to correct an error or to include the effects of natural changes within the areas of special flood hazards. ☐ Yes ☒ No

Note: I understand that my signature indicates that all information submitted in support of this request is correct.

Eric Tsou
Signature of Revision Requester

Eric Tsou, Associate Civil Engineer
Printed Name and Title of Revision Requester

Santa Clara Valley Water District
Company Name

7/19/95
Date

Note: Signature indicates that the community understands, from the revision requester, the impacts of the revision on flooding conditions in the community.

David M McNealy
Signature of Community Official

City Engineer
Printed Name and Title of Community Official

Milpitas
Community Name

7/19/95
Date

Does this request impact any other communities? ☐ Yes ☒ No

If yes, attach letters from all affected jurisdictions acknowledging revision request and approving changes to floodway, if applicable.

Note: Although a photograph of physical changes is not required, it may be helpful for FEMA's review. SEE 10a AERIAL MAP ATTACHED

FEDERAL EMERGENCY MANAGEMENT AGENCY **CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR FORM**	*O.M.B. Burden No. 3067-0148* *Expires July 31, 1994*	*FEMA USE ONLY*

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Public reporting burden for this form is estimated to average . 23 hour per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden, to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067- 0148), Washington, DC 20503.

1. This certification is in accordance with 44 CFR Ch. I, Section 65.2
2. I am licensed with an expertise in HYDRAULICS, STRUCTURAL
   [example: water resources *(hydrology, hydraulics, sediment transport, interior drainage)** structural, geotechnical, land surveying.]
3. I have 13 years experience in the expertise listed above.
4. I have ☒ prepared ☐ reviewed the attached supporting data and analyses related to my expertise.
5. I ☒ have ☐ have not visited and physically viewed the project.
6. In my opinion, the following analyses and /or designs, is/are being certified:
   HEC-2 , EMBANKMENT STABILITY ANALYSIS.
7. Base upon the following review, the modifications in place have been constructed in general accordance with plans and specifications.

   Basis for above statement: (check all that apply)

   a. ☒ Viewed all phases of actual construction.
   b. ☒ Compared plans and specifications with as-built survey information.
   c. ☒ Examined plans and specifications and compared with completed projects.
   d. ☒ Other EXAMINED PLANS & SPECIFICATIONS FROM HWY 237 TO MONTAGUE EXPWY THAT ARE CURRENTLY BEING CONSTRUCTED
8. All information submitted in support of this request is correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: ERIC TSOU
(please print or type)

Title: ASSOCIATE CIVIL ENGINEER
(please print or type)

Registration No. C39975 Expiration Date: 12/31/97

State CALIFORNIA

Type of License CIVIL

Signature

7/19/95
Date,

Seal
(Optional)

*Specify Subdiscipline

Note: Insert not applicable (N/A) when statement does not apply.

FEDERAL EMERGENCY MANAGEMENT AGENCY

CERTIFICATION BY REGISTERED PROFESSIONAL ENGINEER AND/OR LAND SURVEYOR FORM

O.M.B. Burden No. 3067-0148
Expires July 31, 1994

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1. This certification is in accordance with 44 CFR Ch. I, Section 65.2
2. I am licensed with an expertise in Water Resources
   [example: water resources *(hydrology, hydraulics, sediment transport, interior drainage)** structural, geotechnical, land surveying.]
3. I have 9 years experience in the expertise listed above.
4. I have ☒ prepared ☐ reviewed the attached supporting data and analyses related to my expertise.
5. I ☒ have ☐ have not visited and physically viewed the project.
6. In my opinion, the following analyses and /or designs, is/are being certified:
   Revised Guadalupe / Coyote Overflow Floodplains ; Interior Drainage
7. Base upon the following review, the modifications in place have been constructed in general accordance with plans and specifications.

   Basis for above statement: (check all that apply)

   a. ☐ Viewed all phases of actual construction.
   b. ☐ Compared plans and specifications with as-built survey information.
   c. ☐ Examined plans and specifications and compared with completed projects.
   d. ☒ Other LOMR Information Prepared by Santa Clara Valley Water District
8. All information submitted in support of this request is correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

Name: Charles D. Anderson
(please print or type)

Title: Senior Engineer
(please print or type)

Registration No. C43776

Expiration Date: 6-30-97

State California

Type of License Civil Engineer

Charles D Anderson
Signature

7-20-95
Date

Seal
(Optional)

*Specify Subdiscipline

Note: Insert not applicable (N/A) when statement does not apply.

FEDERAL EMERGENCY MANAGEMENT AGENCY

RIVERINE HYDRAULIC ANALYSIS SUMMARY (FORM 4)

SANTA CLARA VALLEY WATER DISTRICT
COYOTE CREEK FLOOD CONTROL PROJECT

This summarizes the methodology used for the hydraulic analyses for the channel improvements on Coyote Creek between the San Francisco Bay and Montague Expressway in the cities of Milpitas and San Jose, California. These analyses form the basis for revising effective FIRM Nos. 060344-0001,0003(effective date 7/4/88) and 060349-0006,0008, 0013(effective date 12/16/88) based on the completion of the Coyote Creek Flood Control Project. Project levees now contain the one-percent discharge within the creek channel, so there are no longer overflows to the east and west of Coyote Creek downstream of Montague Expressway. The HEC-2 output summary attached for FORM 8 indicate all levees meet the FEMA's minimum freeboard requirements.

The hydraulic modeling at the very downstream reaches (HEC-2 files COYA and COY1A), beginning from the Southern Pacific Railroad crossing to the end of bypass channel, were performed using different starting water surfaces. One was performed using the highest estimated tide (HET) at ten-percent Q, the other was using the mean higher high water (MHHW) at one-percent Q. The resulted higher water surface profiles became the control for the levee design upstream.

The bypass channel in Reach 1 will carry floodwater out between Newby Island and the San Francisco Bay and will outlet through the Natural Wildlife Refuge. Since the existing Coyote Creek in Reach 1 can only carry about 2000 cfs, streamflows greater than this amount will overflow into the bypass. However, in our hydraulic analyses we have conservatively assumed that the bypass carries the entire 100-year flow, 12400 cfs.

Reaches 2A & 2B (HEC-2 files COY2A & 2B) consist of parallel overflow earthen channels and levees. The low flow will be contained in the existing channel bottom. Earthen levees constructed on both sides of the channel provide one-percent capacity. The earthen channel narrows into a concrete-lined section under the existing Highway 237 bridge. The HEC-2 runs were performed using Q = 12400 cfs

Reaches 3A and 3B (HEC-2 files COY3A, COY3CH, COY3BP, and COY3E) begin upstream of Highway 237 and extend to upstream of Montague Expressway. They consist of parallel earthen bypass channel and levees. The earthen channel and levees extend through upstream and connect with a concrete-lined section under the existing Montague Expressway. The HEC-2 runs were performed using Q = 12400 cfs.

FEDERAL EMERGENCY MANAGEMENT AGENCY **RIVERINE HYDRAULIC ANALYSIS FORM**	*O.M.B. Burden No. 3067-0148* *Expires July 31, 1994*	**FEMA USE ONLY**

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Community Name: CITIES OF SAN JOSE & MILPITAS

Flooding Source: COYOTE CREEK
(One form for each flooding source)

Project Name/Identifier: COYOTE CREEK FLOOD CONTROL PROJECT

1. REACH TO BE REVISED

Downstream limit: SAN FRANCISCO BAY TIDAL ZONE

Upstream limit: MONTAGUE EXPRESSWAY

2. EFFECTIVE FIS

☐ Not studied

☐ Studied by approximate methods

Downstream limit of study

Upstream limit of study

☒ Studied by detailed methods

Downstream limit of study SAN FRANCISCO BAY

Upstream limit of study MONTAGUE EXPRESSWAY (sta 740+00, U/S OF MONTAGUE)

☐ Floodway delineated

Downstream limit of Floodway

Upstream limit of Floodway

3. HYDRAULIC ANALYSIS

Why is the hydraulic analysis different from that used to develop the FIRM. *(Check all that apply)*

☐ Not studied in FIS

☐ Improved hydrologic data/analysis. Explain:

☒ Improved hydraulic analysis. Explain: NEW CROSS SECTIONS & CHANNEL ALIGNMENT ALTERED.

☒ Flood control structure. Explain: COYOTE CREEK PROJECT HAS ELIMINATED COYOTE CREEK OVERFLOW FROM THE CREEK THRU CHANNEL IMPROVEMENTS, & BYPASS CHANNELS.

☐ Other. Explain:

3. RIVERINE HYDRAULIC ANALYSIS FORM
Models Submitted

Full input and output listings along with files on diskette *(if available)* for each of the models listed below and summary of the source of input parameters used in the models must be provided. The summary must include a complete description of any changes made from model to model (*e.g. duplicate effective model to corrected effective model).* Only the Duplicate Effective and the Revised or Post-Project Conditions models must be submitted. See instructions for directions on when other models may be required. Only the 100-year flood profile is required for SFHAs with a Zone A designation. For areas which do not have detailed flooding, a hydraulic model is not required; however BFE's may not be added to the revised FIRM.

☒ Duplicate Effective Model

Natural ☒ Floodway ☐

Copies of the hydraulic analysis used in the effective FIS, referred to as the effective models *(10-, 50-, 100-, and 500-year multi-profile runs and the floodway run)* must be obtained and then reproduced on the requestor's equipment to produce the duplicate effective model. This is required to assure that the effective model input data has been transferred correctly to the requestor's equipment and to assure that the revised data will be integrated into the effective data to provide a continuous FIS model upstream and downstream of the revised reach.

☐ Corrected Effective Model

Natural ☐ Floodway ☐

The corrected effective model is the model that corrects any errors that occur in the duplicate effective model, adds any additional cross sections to the duplicate effective model, or incorporates more detailed topographic information than that used in the currently effective model. The corrected effective model must not reflect any man-made physical changes since the date of the effective model. An error could be a technical error in the modeling procedures, or any construction in the floodplain that occurred prior to the date of the effective model but was not incorporated into the effective model.

☐ Existing or Pre-Project Conditions Model

Natural ☐ Floodway ☐

The duplicate effective or corrected model is modified to produce the existing or pre-project conditions model to reflect any modifications that have occurred within the floodplain since the date of the effective model but prior to the construction of the project for which the revision is being requested. If no modification has occurred since the date of the effective model, then this model would be identical to the corrected effective or duplicate effective model.

☒ Revised or Post-Project Conditions Model

Natural ☒ Floodway ☐

The existing or pre-project conditions model *(or duplicate effective or corrected effective model, as appropriate)* is revised to reflect revised or post-project conditions. This model must incorporate any physical changes to the floodplain since the effective model was produced as well as the effects of the project. When the request is for proposed project this model should reflect proposed conditions.

☐ Other: Please attach a sheet describing all other models or calculations submitted.

Natural ☐ Floodway ☐

4. MODEL PARAMETERS ***(from model used to revise 100-year water surface elevation)***

1. Discharges:

Discharges	Upstream Limit	Downstream Limit
10-year		
50-year		
100-year	* 12400 cfs	12400 cfs
500-year		

Attach diagram showing changes in 100-year discharge * 100 YR. Q=12400 cfs IS USED BASED ON FEMA'S FIRM STUDY BY G. NOLTE AT Sta ±745+00 U/S OF MONT EXPRE

2. Explain how the starting water surface elevations were determined BASED ON THE HIGHEST ESTIMATED TIDE (HET) AND MEAN HIGHER HIGH WATER (MHHW) at the BAY NEAR SOUTHERN PACIFIC RAILROAD CROSSING. (SEE ATTACHED HEC-2 FILE COYA & COY1A).

3. Give range of friction loss coefficients (*Manning's "N"*) Channel .... 0.018 TO 0.07

Overbanks ...... 0.018 TO 0.035

If friction loss coefficients are different anywhere along the revised reach from those used to develop the FIRM, give location, value used in the effective FIS, and revised values and an explanation as to how the revised values were determined.

Location	FIS	Revised
S.F. BAY TO MONTAGUE	0.045	0.035 TO 0.07

Explain: REVISED ROUGHNESS COEFFICIENTS WERE DERIVED FROM ACTUAL SITE CONDITIONS & DESIGN CONSIDERATIONS.

4. Describe how the cross section geometry data were determined (*e.g., field survey, topographic map, taken from previous study*) and list cross sections that were added.

REVISED CROSS SECTIONS GEOMETRY IS BASED ON AS-BUILT PLANS & CONSTRUCTION PLANS FOR 100-YR Q.

4. MODEL PARAMETERS *(Cont'd)*

5. Explain how reach lengths for channel and overbanks were determined:

REACH LENGTHS WERE DETERMINED DURING THE DESIGN STAGE. SEE ATTACHED 1000' SCALE AERIAL MAP.

5. RESULTS *(from model used to revise 100-year water surface elevations)*

1. Do the results indicate:

a. Water surface elevations higher than end points of cross sections? .... ☐ Yes ☒ No

b. Supercritical depth? .... ☐ Yes ☒ No

c. Critical depth? .... ☐ Yes ☒ No

d. Other unique situations .... ☐ Yes ☒ No

If yes to any of the above, attach an explanation that discusses the situation and how it is presented on the profiles, tables, and maps.

2. What is the maximum change in energy gradient between cross-sections? 0.77

Specify location .... Sta 687+00 TO 690+00

3. What is the distance between the cross-sections in 2 above? .... 200 feet

Specify location .... REACH 3B

4. What is the maximum distance between cross-sections? .... 520 feet

Specify location .... Sta 579+00 To 584+00

5. Floodway determination

a. What is the maximum surcharge allowed by the community or State? .... N/A foot

b. What is the maximum surcharge for the revised conditions? .... ______ foot

Specify location .... ______

c. What is the maximum velocity? .... ______ fps

Specify location .... ______

Explain: ______

d. Are there any negeative surcharge values at any cross-section ☐ Yes ☒ No

If yes, the floodway may need to widen. If it is not widened, please explain and indicate the maximum negative surcharge.

5. RESULTS *(Cont'd)*

6. Is the discharge value used to determine the floodway anywhere different from that used to determine the natural 100-year flood elevations? .... ☐ Yes ☒ No

If Yes, explain:

N/A

7. Do 100-year water surface elevations increase at any location? .... ☒ Yes ☐ No

If yes, please attach a list of the locations where the increases occur, state whether or not the increases are located on the requestor's property, and provide an explanation of the reason for the increases.

100-YR WATER ELEVATIONS INCREASE DUE TO CHANNEL IMPROVEMENTS THAT RESULT IN AN INCREASE IN CAPACITY TO CONTAIN 100-YR FLOWS

Please attach a completed comparison table entitled: Water Surface Elevation Check (See page 6) ATTACHED

6. REVISED FIRM/FBFM AND FLOOD PROFILES

A. The revised water surface elevations tie into those computed by the effective FIS Model *(10-, 50-, 100-, and 500-year)*, downstream of the project at cross-section 500+00 within 6.0 feet and upstream of the project at cross section 740+00 within 130 feet.

B. The revised floodway elevations tie into those computed by the effective FIS model, dowstream of the project at cross section N/A within ______ feet and upstream of the project at cross section ______ within ______ feet.

C. Attach profiles, at the same vertical and horizontal scale as the profiles in the effective FIS report, showing stream bed and profiles of all floods studied (without encroachment). Also, label all cross sections, road crossings (including low chord and top-of-road data), culverts, tributaries, corporate limits, and study limits. If channel distance has changed, the stationing should be revised for all profile sheets. FIS REPORT DID NOT INCLUDE DETAILED STUDY IN THESE REACHES

D. Attach a Floodway Data Table showing data for each cross section listed in the published Floodway Data Table in the FIS report. N/A

Proceed to Riverine /Coastal Mapping Form

FEDERAL EMERGENCY MANAGMENT AGENCY

WATER SURFACE ELEVATION CHECK

OMMUNITY NAME

FLOODIND SOURCE

PROJECT NAME /IDENTIFIER

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
SECNO	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]

SEE ATTACHED

COMMENTS:

1-100-year (nat Vater Surface Elevation 2-Encroachment (floodway) Water Surface Elevation 3-Surcharge Value

Include all cross sections in the models between tie-in points. Any interpolate ues should be indicated in parentheses.

of 6

Sheet ___ of ___

FEDERAL EMERGENCY MANAGMENT AGENCY

WATER SURFACE ELEVATION CHECK

COMMUNITY NAME	FLOODIND SOURCE	PROJECT NAME /IDENTIFIER
CITIES OF MILPITAS & SAN JOSE	COYOTE CREEK	COYOTE CREEK FLOOD CONTROL

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
				COY2 (FIS-CAPACITY)									COY2A		
SECNO	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³
500+00				11.39										12.24	
504+00				11.47										12.82	
507+50				11.48										14.97	
510+00				11.56										15.66	
512+50				11.63										15.75	
515+00				11.82										15.82	
520+00				12.10										16.15	
525+00				12.75										16.84	
530+00				13.31										17.52	
532+50				13.53										17.90	
535+00				13.71										18.00	
537+50				14.11										18.08	
545+00				14.77										18.28	

COMMENTS:

1-100-year (natural) Water Surface Elevation

2-Encroachment (floodway) Water Surface Elevation

3-Surcharge Value

all cross sections in the models between tie-in points. Any interpolated values should be indicated in parentheses.

Sheet 1 of 5

FEDERAL EMERGENCY MANAGMENT AGENCY

WATER SURFACE ELEVATION CHECK

COMMUNITY NAME: CITIES OF MILPITAS & SAN JOSE

FLOODIND SOURCE: COYOTE CREEK

PROJECT NAME /IDENTIFIER: COYOTE CREEK FLOOD CONTROL

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
				COY2 - (FIS-CAPACITY)									COY2A / COY2B		
SECNO	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]
555+00				15.46										18.40	
562+50				15.90										18.50	
565+00				16.06										18.72	
570+00				16.99										19.90	
572+50				17.40										19.99	
575+00				17.68										20.23	
577+50				18.56										20.54	
580+00				19.56										20.86	
585+00				20.54										22.12	
589+60				21.38										22.62	
590+35				21.10										22.68	
591+40				21.74										22.76	
593+80				22.23										21.20	

COMMENTS:

1-100-year (natural) Water Surface Elevation
2-Encroachment (floodway) Water Surface Elevation
3-Surcharge Value

Any interpolated values should be indicated in parentheses.

FEDERAL EMERGENCY MANAGMENT AGENCY

WATER SURFACE ELEVATION CHECK

COMMUNITY NAME: CITIES OF MILPITAS & SAN JOSE

FLOODIND SOURCE: COYOTE CREEK

PROJECT NAME /IDENTIFIER: COYOTE CREEK FLOOD CONTROL

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
				COY2 (FIS-CAPACITY)									COY3A / COY3CH		
SECNO	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]
599+15				23.19										24.24	
604+00				24.89										26.30	
606+95				25.50										26.63	
611+00				26.51										26.93	
616+00				26.60										27.17	
630+20				28.55										27.86*	
633+00				28.92										28.13*	
636+90				29.18										28.22*	
640+60				29.66										28.43*	
654+90				31.81										29.38*	
660+20				32.93										29.73*	
664+20				33.56										29.96*	
667+45				33.86										30.06*	

COMMENTS:

*WATER SURFACE ELEVATION SPLIT FLOW OF NATURAL CHANNEL & BY-PASS.

FROM 630+20 TO 726+80, WATER ELEVATION IS LOWER THAN THAT OF FIS BECAUSE OF THE CONSIDERABLE AMOUNT OF CHANGES IN CAPACITY.

1-100-year (natural) Water Surface Elevation 2-Encroachment (floodway) Water Surface Elevation 3-Surcharge Value

Any interpolated values should be indicated in parentheses.

FEDERAL EMERGENCY MANAGMENT AGENCY
WATER SURFACE ELEVATION CHECK

COMMUNITY NAME	FLOODIND SOURCE	PROJECT NAME /IDENTIFIER
CITIES OF MILPITAS & SAN JOSE	COYOTE CREEK	COYOTE CREEK FLOOD CONTROL

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
				COY2 (FIS-CAPACITY)									COY3A / COY3CH		
SECNO	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³
675+40				35.53										30.46*	
676+80				35.61										30.51*	
682+00				36.42										30.82*	
685+00				36.77										30.87*	
689+00				36.58										30.97*	
694+15				37.27										30.96*	
697+90				37.85										31.40*	
702+85				38.38										32.21*	
707+30				38.50										33.55*	
713+15				39.49										34.59*	
719+70				40.11										34.94*	
720+85				40.62										35.12*	
726+80				42.72										35.66*	

COMMENTS:

* WATER SURFACE ELEVATION OF NATURAL CHANNEL & BY-PASS.

FROM 630+20 TO 726+80, WATER ELEVATION IS LOWER THAN THAT OF FIS BECAUSE OF THE CONSIDERABLE AMOUNT OF CHANGES IN CAPACITY.

1-100-year (natural) Water Surface Elevation 2-Encroachment (floodway) Water Surface Elevation 3-Surcharge Value

Include all cross sections in the models between tie-in points. Any interpolated values should be indicated in parentheses.

Sheet 4 of 5

FEDERAL EMERGENCY MANAGMENT AGENCY

WATER SURFACE ELEVATION CHECK

COMMUNITY NAME: CITIES OF MILPITAS & SAN JOSE

FLOODIND SOURCE: COYOTE CREEK

PROJECT NAME /IDENTIFIER: COYOTE CREEK FLOOD CONTROL

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
				COY 2 (FIS-CAPACITY)									COY3E		
SECNO	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]
730+05				43.24										36.10	
731+15				43.26										36.12	
735+00				43.36										36.60	
738+70				43.40										36.18	
742+60				43.44										37.21	
745+90				43.57										37.85	

COMMENTS:

1-100-year (natural) Water Surface Elevation

2-Encroachment (floodway) Water Surface Elevation

3-Surcharge Value

Any interpolated values should be indicated in parentheses.

FEDERAL EMERGENCY MANAGEMENT AGENCY
RIVERINE HYDRAULIC ANALYSIS FORM (FORM 4)

SANTA CLARA VALLEY WATER DISTRICT
COYOTE CREEK FLOOD CONTROL PROJECT
Residual Floodplain West of Coyote Creek

Purpose. This report attached to FEMA Form 4 details the hydrologic and hydraulic analyses that form the basis for revising effective FIRM Nos. 060337-0060E, 060337-0070E, and 060344-0001(effective date 07/04/88), 060344-0003E (effective date February 19, 1986), and 060349-0006,0009,0008,0013,0014E(effective date 12/16/88) based on the completion of the Coyote Creek Flood Control Project from San Francisco Bay to Montague Expressway (described in detail on a separate Form 4 contained within this LOMR package). Project levees contain the one-percent discharge within the creek channel, so there are no longer overflows to the east or west of Coyote Creek downstream of Trimble Road / Montague Expressway. This report concentrates on the west side of the creek.

Area of Revision. The area of zone revision is bound by Coyote Creek to the east, Guadalupe River to the west, the San Francisco Bay tidal zone to the north, and Brokaw Road to the south. LOMR work maps show the area of revision and the tie-in to the effective FIRM at Brokaw Road.

Methodology. Without overflow from Coyote Creek, Guadalupe River overflows are the only remaining source of flooding within the area of revision. (Local runoff is not significant when compared to the magnitude of Guadalupe River overflow.) In 1988 Nolte and Associates prepared cross sections for the entire area of revision based on 1987 aerial photogrammetry, and as part of a North San Jose floodplain management study, prepared HEC-2 models for the Guadalupe / Coyote overbank area between San Francisco Bay and Highway 101 (ref. 1).

These models are used for the LOMR request, except that 100-year discharge is reduced to reflect the completion of the Coyote Creek Flood Control Project. The new 100-year discharge is 2,270 cfs, which is the Guadalupe River overflow from the confluence with Los Gatos Creek near Interstate 880. This overflow continues from the confluence through downtown San Jose north past the Civic Center to Highway 101, where it passes through several openings in the freeway. Bound by the Guadalupe River levee to the west and higher ground to the east, the flow makes its way past industrial development parallel to First Street until it reaches San Francisco Bay.

Nolte modeled 1987 development by placing actual buildings and their effective flow shadows in the cross sections, and doubling "n" values to reflect future blockage of 50 percent (City of San Jose development policy in the area). This condition reflects ultimate buildout within the area and is used to map the revised floodplain as a worst case. Open areas have a Manning's n value of 0.045; blocked areas use an n value of 0.090.

Split Flow Area. Trimble Road is high and forms a blockage to flow. The lowest portion of the Trimble Road profile is not aligned with the majority of flow in the Guadalupe River overbank. As a result, flow actually moves parallel to Trimble Road to the low point east of Zanker Road. This is modeled using the HEC-2 split flow capability. A split flow deck has been set up to model the higher water surface elevations east of Zanker Road. Based on cross-sectional flow conveyance upstream of Trimble Road, approximately 1,000 cfs splits off and crosses Trimble to the east of Zanker Road. Downstream of Trimble, flow conveyance east of Zanker gradually decreases, thus forcing the split flow to rejoin the main area of flow by Section 188. This is also modeled using the split flow capability of HEC-2. Upstream of Trimble Road the two decks merge by matching the water surface elevation at Section 204 (critical depth).

Results. The revised floodplain is described on Form 4 and shown on the attached LOMR work maps. In general the floodplain is smaller in area and shallower in depth than either the effective FIS or the Nolte mapping. Within the split flow area, however, base flood elevations are higher than for the original FIS, since the original mapping did not delineate a separate flow split at Trimble Road. This may be primarily a case of having better information at this time.

Reference

1. Nolte and Associates, *North San Jose 1987 Floodplain Management Study,* January 1988.

FEDERAL EMERGENCY MANAGEMENT AGENCY
RIVERINE HYDRAULIC ANALYSIS FORM (FORM 4)

Attachment for Section 5 (Results)

1a. Water surface elevations are higher than the end points of cross sections in some locations. Many of the cross sections are within the 100-year tidal zone, which overrides the riverine analysis. No cross section end point is exceeded without an effective flow encroachment. Also cross sections are sufficient to map all daylight points.

1c. Critical depth is indicated at Section 120 (Highway 237), Section 190 (Trimble Road) , and Section 204 (Component Drive). These facilities appear to be sufficiently raised above the adjacent floodplain to control the water surface profile.

1d. Trimble Road is high and forms a blockage to flow. The lowest portion of the Trimble Road profile is not aligned with the majority of flow in the Guadalupe River overbank. As a result, flow actually moves parallel to Trimble Road to the low point east of Zanker Road. This is modeled using the HEC-2 split flow capability. A split flow deck has been set up to model the higher water surface elevations east of Zanker Road. Based on cross-sectional flow conveyance upstream of Trimble Road, approximately 1,000 cfs splits off and crosses Trimble to the east of Zanker Road. Downstream of Trimble, flow conveyance east of Zanker gradually decreases, thus forcing the split flow to rejoin the main area of flow by Section 188. This is also modeled using the split flow capability of HEC-2. Upstream of Trimble Road the two decks merge by matching the water surface elevation at Section 204 (critical depth).

7. The effective FIS was prepared before Montague Expressway and Trimble Road were improved in this area. Thus the FIS did not examine the split flow area in detail. As a result of the more detailed analysis, water surface elevations *within the split flow area only* have increased relative to the effective FIS. Also, the LOMR is using cross sections that represent fully developed conditions, as opposed to the effective FIS.

FEDERAL EMERGENCY MANAGEMENT AGENCY **RIVERINE HYDRAULIC ANALYSIS FORM**	*O.M.B. Burden No. 3067-0148* *Expires July 31, 1994*	**FEMA USE ONLY**

PUBLIC BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 2.25 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden, to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

Community Name: City of San Jose (INTERIOR DRAINAGE STUDY ONLY)

Flooding Source: Guadalupe River Overflow
(One form for each flooding source)

Project Name/Identifier: Coyote Creek Flood Control Project

1. REACH TO BE REVISED

Downstream limit: San Francisco Bay Tidal Zone

Upstream limit: Brokaw Road

2. EFFECTIVE FIS

☐ Not studied

☐ Studied by approximate methods

Downstream limit of study

Upstream limit of study

☒ Studied by detailed methods

Downstream limit of study San Francisco Bay

Upstream limit of study Confluence with Los Gatos Creek I-880.

☐ Floodway delineated

Downstream limit of Floodway

Upstream limit of Floodway

3. HYDRAULIC ANALYSIS

Why is the hydraulic analysis different from that used to develop the FIRM. *(Check all that apply)*

☐ Not studied in FIS

☐ Improved hydrologic data/analysis. Explain:

☒ Improved hydraulic analysis. Explain: New cross sections based on 1987 aerial photography and "n" values assuming 50% blockage for entire area per 1988 study by Nolte and Associates.

☒ Flood control structure. Explain: Coyote Creek Flood Control Project has eliminated Coyote Creek Overflow from the reach.

☐ Other. Explain:

3. RIVERINE HYDRAULIC ANALYSIS FORM

Models Submitted

Full input and output listings along with files on diskette *(if available)* for each of the models listed below and summary of the source of input parameters used in the models must be provided. The summary must include a complete description of any changes made from model to model (*e.g. duplicate effective model to corrected effective model*). Only the Duplicate Effective and the Revised or Post-Project Conditions models must be submitted. See instructions for directions on when other models may be required. Only the 100-year flood profile is required for SFHAs with a Zone A designation. For areas which do not have detailed flooding, a hydraulic model is not required; however BFE's may not be added to the revised FIRM.

☒ Duplicate Effective Model

Natural ☒ Floodway ☐

Copies of the hydraulic analysis used in the effective FIS, referred to as the effective models *(10-, 50-, 100-, and 500-year multi-profile runs and the floodway run)* must be obtained and then reproduced on the requestor's equipment to produce the duplicate effective model. This is required to assure that the effective model input data has been transferred correctly to the requestor's equipment and to assure that the revised data will be integrated into the effective data to provide a continuous FIS model upstream and downstream of the revised reach.

☐ Corrected Effective Model

Natural ☐ Floodway ☐

The corrected effective model is the model that corrects any errors that occur in the duplicate effective model, adds any additional cross sections to the duplicate effective model, or incorporates more detailed topographic information than that used in the currently effective model. The corrected effective model must not reflect any man-made physical changes since the date of the effective model. An error could be a technical error in the modeling procedures, or any construction in the floodplain that occurred prior to the date of the effective model but was not incorporated into the effective model.

☒ Existing or Pre-Project Conditions Model

Natural ☒ Floodway ☐

The duplicate effective or corrected model is modified to produce the existing or pre-project conditions model to reflect any modifications that have occurred within the floodplain since the date of the effective model but prior to the construction of the project for which the revision is being requested. If no modification has occurred since the date of the effective model, then this model would be identical to the corrected effective or duplicate effective model.

☒ Revised or Post-Project Conditions Model

Natural ☒ Floodway ☐

The existing or pre-project conditions model *(or duplicate effective or corrected effective model, as appropriate)* is revised to reflect revised or post-project conditions. This model must incorporate any physical changes to the floodplain since the effective model was produced as well as the effects of the project. When the request is for proposed project this model should reflect proposed conditions.

☐ Other: Please attach a sheet describing all other models or calculations submitted.

Natural ☐ Floodway ☐

4. MODEL PARAMETERS *(from model used to revise 100-year water surface elevation)*

1. Discharges:

Discharges	Upstream Limit	Downstream Limit
10-year		
50-year		
100-year	2,270 cfs	2,270 cfs
500-year		

Attach diagram showing changes in 100-year discharge

2. Explain how the starting water surface elevations were determined Routing through Storage - elevation curve per effective FIS and 1988 Nolte study. Tidal elevation governs until Hwy 237.

3. Give range of friction loss coefficients (*Manning's "N"*) Channel .... N/A

Overbanks ...... .045 - .09*

* n value double for 50% blockage (Nolte)

If friction loss coefficients are different anywhere along the revised reach from those used to develop the FIRM, give location, value used in the effective FIS, and revised values and an explanation as to how the revised values were determined.

Location	FIS	Revised
SF Bay to U/S Montague	0.035	.045 - .090
U/S Montague to Brokaw	0.030	.045 - .090

Explain: Revised study accounts for building blockage w/ n = .09 (50% blockage). Area was undeveloped when effective FIS prepared in 1976.

4. Describe how the cross section geometry data were determined *(e.g., field survey, topographic map, taken from previous study)* and list cross sections that were added.

Aerial Photogrammetry by Nolte and Associates (1987). Cross Sections shown on work map.

4. MODEL PARAMETERS (Cont'd)

5. Explain how reach lengths for channel and overbanks were determined:

Taken from 1988 study by Nolte and Associates
ref: "North San Jose 1987 Floodplain Management Study"
prepared for City of San Jose Dept. of Public Works
by Nolte and Associates, January 1988

5. RESULTS *(from model used to revise 100-year water surface elevations)*

1. Do the results indicate:

a. Water surface elevations higher than end points of cross sections? ☒ Yes ☐ No
b. Supercritical depth? ☐ Yes ☒ No
c. Critical depth? ☒ Yes ☐ No
d. Other unique situations ☒ Yes ☐ No

If yes to any of the above, attach an explanation that discusses the situation and how it is presented on the profiles, tables, and maps.

2. What is the maximum change in energy gradient between cross-sections? 0.1233
Specify location Sec 118
3. What is the distance between the cross-sections in 2 above? 657 feet
Specify location
4. What is the maximum distance between cross-sections? 1400. feet
Specify location 218 to 220
5. Floodway determination
a. What is the maximum surcharge allowed by the community or State? ______ foot
b. What is the maximum surcharge for the revised conditions? ______ foot
Specify location ______
c. What is the maximum velocity? ______ fps
Specify location ______

Explain:

d. Are there any negative surcharge values at any cross-section ☐ Yes ☐ No
If yes, the floodway may need to widen. If it is not widened, please explain and indicate the maximum negative surcharge.

6. Is the discharge value used to determine the floodway anywhere different from that used to determine the natural 100-year flood elevations? .... ☐ Yes ☐ No

If Yes, explain:

7. Do 100-year water surface elevations increase at any location? .... ☒ Yes ☐ No

If yes, please attach a list of the locations where the increases occur, state whether or not the increases are located on the requestor's property, and provide an explanation of the reason for the increases.

100-year water elevations increase for split flow deck. See attached explanation. Some increase just downstream of Brokaw Road.

Please attach a completed comparison table entitled: Water Surface Elevation Check (See page 6)

6. REVISED FIRM/FBFM AND FLOOD PROFILES

A. The revised water surface elevations tie into those computed by the effective FIS Model *(10-, 50-, 100-, and 500-year)*, downstream of the project at cross-section 100 within 0.0 feet and upstream of the project at cross section 224 within 0.0 feet.

B. The revised floodway elevations tie into those computed by the effective FIS model, dowstream of the project at cross section______ within______ feet and upstream of the project at cross section______ within______ feet.

C. Attach profiles, at the same vertical and horizontal scale as the profiles in the effective FIS report, showing stream bed and profiles of all floods studied (without encroachment). Also, label all cross sections, road crossings (including low chord and top-of-road data), culverts, tributaries, corporate limits, and study limits. If channel distance has changed, the stationing should be revised for all profile sheets.

D. Attach a Floodway Data Table showing data for each cross section listed in the published Floodway Data Table in the FIS report.

Proceed to Riverine /Coastal Mapping Form

FEDERAL EMERGENCY MANAGMENT AGENCY

WATER SURFACE ELEVATION CHECK

COMMUNITY NAME: North San Jose, CA

FLOODIND SOURCE: Guadalupe River

PROJECT NAME /IDENTIFIER:

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
SECNO	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]
100	–									5.60			5.60		
102	–									5.67			5.61		
104	–									5.72			5.61		
106	–									5.76			5.61		
108	–									5.86			5.62		
110	–									5.94			5.63		
112	–									6.01			5.64		
114	–									6.04			5.65		
116	–									6.18			5.66		
118	6.60									6.74			5.81		
120	(7.33)									7.47			6.26		
122	(9.84)									8.02			6.40		
124	(9.90)									8.15			6.76		

COMMENTS:

1-100-year (natural) Water Surface Elevation 2-Encroachment (floodway) Water Surface Elevation 3-Surcharge Value

Include all cross sections in the models between tie-in points. Any interpolated values should be indicated in parentheses.

Sheet 1 of 5

FEDERAL EMERGENCY MANAGMENT AGENCY

WATER SURFACE ELEVATION CHECK

COMMUNITY NAME	FLOODIND SOURCE	PROJECT NAME /IDENTIFIER

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
SECNO	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³	NCWSEL¹	FCWSEL²	SURC.³
126	(9.90)									8.20			6.80		
128	(9.90)									8.79			7.34		
130	(9.93)									9.43			7.90		
132	(10.25)									10.29			8.75		
134	(10.38)									10.63			9.16		
136	(10.94)									11.37			10.05		
144	(12.30)									12.15			10.80		
146	(13.48)									12.52			11.23		
148	(14.55)									13.27			12.27		
150	(15.78)									14.73			13.96		
152	(16.45)									15.61			14.73		
154	(16.80)									16.02			14.99		
156	(16.84)									16.05			15.01		

COMMENTS:

1-100-year (natural) Water Surface Elevation 2-Encroachment (floodway) Water Surface Elevation 3-Surcharge Value

Include all cross sections in the models between tie-in points. Any interpolated values should be indicated in parentheses.

Sheet 2 of 5

FEDERAL EMERGENCY MANAGMENT AGENCY

WATER SURFACE ELEVATION CHECK

COMMUNITY NAME	FLOODIND SOURCE	PROJECT NAME /IDENTIFIER

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
SECNO	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]
158	(17.05)									16.27			15.08		
160	(17.28)									17.04			15.72		
162	17.61									17.41			16.10		
164	(17.97)									17.88			16.71		
166	(18.04)									17.95			17.29		
168	(18.11)									18.49			17.60		
170	(18.67)									18.81			17.76		
172	(19.40)									19.74			18.35		
174	(20.18)									20.85			21.15		
176	(20.53)									21.26			22.06		
178	(20.57)									21.37			22.47		
180	(20.61)									21.43			22.79		
182	(20.71)									21.46			22.81		

COMMENTS:

1-100-year (natural) Water Surface Elevation   2-Encroachment (floodway) Water Surface Elevation   3-Surcharge Value

Include all cross sections in the models between tie-in points. Any interpolated values should be indicated in parentheses.

Sheet 3 of 5

FEDERAL EMERGENCY MANAGMENT AGENCY
WATER SURFACE ELEVATION CHECK

COMMUNITY NAME

FLOODIND SOURCE

PROJECT NAME /IDENTIFIER

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
SECNO	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]
184	(21.88)									21.98			22.87		
186	(24.68)									22.44			23.09		
188	(27.23)									22.67			23.57		
190	(27.27)									22.91			24.37		
192	(27.40)									25.35			24.85		
194	(27.45)									25.98			25.85		
196	(27.52)									26.42			26.45		
198	(27.37)									27.01			26.62		
200	(27.65)									27.30			26.69		
202	(27.52)									27.57			26.79		
204	(27.88)									28.00			27.13		
206	(29.64)									30.24			30.01		
208	30.64									30.84			30.40		

COMMENTS:

1-100-year (natural) Water Surface Elevation 2-Encroachment (floodway) Water Surface Elevation 3-Surcharge Value

Include all cross sections in the models between tie-in points. Any interpolated values should be indicated in parentheses.

Sheet 4 of 5

FEDERAL EMERGENCY MANAGMENT AGENCY
WATER SURFACE ELEVATION CHECK

COMMUNITY NAME	FLOODIND SOURCE	PROJECT NAME /IDENTIFIER

	EFFECTIVE			DUPLICATE EFFECTIVE			CORRECTED EFFECTIVE			EXISTING/PRE-PROJECT			REVISED/PROJECT		
SECNO	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]	NCWSEL[1]	FCWSEL[2]	SURC.[3]
210	(30.77)									31.27			30.78		
212	(30.82)									31.38			30.88		
214	(30.86)									31.45			30.93		
216	(30.91)									31.53			30.99		
218	(31.05)									31.67			31.11		
220	(33.89)									34.39			34.74		
222	(36.55)									36.37			36.92		
224	(37.08)									36.94			37.08	*	
226										37.14			37.22		
228										37.25			37.31		
236										37.80			37.80		
240										39.16			39.16		
242										39.88			39.88		

COMMENTS:

* Match Effective FIS at Brokaw Road.

1-100-year (natural) Water Surface Elevation
2-Encroachment (floodway) Water Surface Elevation
3-Surcharge Value

Include all cross sections in the models between tie-in points. Any interpolated values should be indicated in parentheses.

Sheet 5 of 5

FEDERAL EMERGENCY MANAGEMENT AGENCY

RIVERINE HYDRAULIC ANALYSIS FORM (FORM 4)

FOR INTERIOR DRAINAGE STUDY

Attachment for Section 5 (Results)

1a. Water surface elevations are higher than the end points of cross sections in some locations. Many of the cross sections are within the 100-year tidal zone, which overrides the riverine analysis. No cross section end point is exceeded without an effective flow encroachment. Also cross sections are sufficient to map all daylight points.

1c. Critical depth is indicated at Section 120 (Highway 237), Section 190 (Trimble Road) , and Section 204 (Component Drive). These facilities appear to be sufficiently raised above the adjacent floodplain to control the water surface profile.

1d. Trimble Road is high and forms a blockage to flow. The lowest portion of the Trimble Road profile is not aligned with the majority of flow in the Guadalupe River overbank. As a result, flow actually moves parallel to Trimble Road to the low point east of Zanker Road. This is modeled using the HEC-2 split flow capability. A split flow deck has been set up to model the higher water surface elevations east of Zanker Road. Based on cross-sectional flow conveyance upstream of Trimble Road, approximately 1,000 cfs splits off and crosses Trimble to the east of Zanker Road. Downstream of Trimble, flow conveyance east of Zanker gradually decreases, thus forcing the split flow to rejoin the main area of flow by Section 188. This is also modeled using the split flow capability of HEC-2. Upstream of Trimble Road the two decks merge by matching the water surface elevation at Section 204 (critical depth).

7. The effective FIS was prepared before Montague Expressway and Trimble Road were improved in this area. Thus the FIS did not examine the split flow area in detail. As a result of the more detailed analysis, water surface elevations *within the split flow area only* have increased relative to the effective FIS. Also, the LOMR is using cross sections that represent fully developed conditions, as opposed to the effective FIS.

FEDERAL EMERGENCY MANAGEMENT AGENCY **RIVERINE/COASTAL MAPPING FORM**	*O.M.B. Burden No. 3067-0148* *Expires July 31, 1994*	*FEMA USE ONLY*

PUBLIC BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1.5 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden, to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

Community Name: CITIES OF SAN JOSE & MILPITAS

Flooding Source: COYOTE CREEK

Project Name/Identifier: COYOTE CREEK FLOOD CONTROL PROJECT

1. MAPPING CHANGES

1. A topographic work map of suitable scale, contour interval, and planimetric definition must be submitted showing *(indicate N/A when not applicable)*:

		Included		
A.	Revised approximate 100-year floodplain boundaries (Zone A)	☐ Yes	☐ No	☒ N/A
B.	Revised detailed 100- and 500-year floodplain boundaries	☒ Yes	☐ No	☐ N/A
C.	Revised 100-year floodway boundaries	☐ Yes	☐ No	☒ N/A
D.	Location and alignment of all cross sections used in the revised hydraulic model with stationing control indicated (ATTACHED 1000' SCALE MAP)	☒ Yes	☐ No	☐ N/A
E.	Stream alignments, road and dam alignments	☒ Yes	☐ No	☐ N/A
F.	Current community boundaries	☒ Yes	☐ No	☐ N/A
G.	Effective 100- and 500-year floodplain and 100-year floodway boundaries from the FIRM/FBFM reduced or enlarged to the scale of the topographic work map	☐ Yes	☒ No	☐ N/A
H.	Tie-ins between the effective and revised 100- and 500-year floodplains and 100-year floodway boundaries	☒ Yes	☐ No	☐ N/A
I.	The requestor's property boundaries and community easements	☒ Yes	☐ No	☐ N/A
J.	The signed certification of a registered professional engineer	☒ Yes	☐ No	☐ N/A
K.	Location and description of reference marks (SEE ATTACHED 1000' MAP)	☒ Yes	☐ No	☐ N/A
L.	Vertical datum (example: NGVD, NAVD etc.)	☒ Yes	☐ No	☐ N/A
M.	Coastal zone designations tie into adjacent areas not being revised	☐ Yes	☐ No	☒ N/A
N.	Location and alignment of all coastal transects used to revise the coastal analyses	☐ Yes	☐ No	☒ N/A

If any of the items above are marked no or N/A, please explain: NO APPROXIMATE BOUNDARIES; DETAILED ONLY COASTAL ZONE DOES NOT APPLY. NO FLOODWAY.

2. What is the source and date of the updated topographic information *(example: orthophoto maps, July 1985; field survey, May 1979, beach profiles, June 1987, etc.)*? CITY OF MILPITAS AS-BUILT PLANS, 1995, & PHOTOGRAMMET 1987 SECOND AERIAL MAP, 3, 1993.

3. What is the scale and contour interval of the following workmaps?

a. Effective FIS 500 scale N/A Contour interval

b. Revision Request 500 & 1000 scale N/A Contour interval

NOTE: Revised topographic information must be of equal or greater detail.

4. Attach an annotated FIRM and FBFM at the scale of the effective FIRM and FBFM showing the revised 100-year and 500-year floodplains and the 100-year floodway boundaries and how they tie into those shown on the effective FIRM and FBFM downstream and upstream of the revision or adjacent to the area of revision for coastal studies.

Attach additional pages if needed.

5. Flood Boundaries and 100-year water surface elevations:

Has the 100-year floodplain been shifted or increased or the 100-year water surface elevation increased at any location on property other than the requestor's or community's ? ☐ Yes ☒ No

If yes, please give the location of shift or increase and an explanation for the increase.

a. Have the affected property owners been notified of this shift or increase and the effect it will have on their property? .... N/A .... ☐ Yes ☐ No

If yes, please attach letters from these property owners stating they have no objections to the revised flood boundaries if a LOMR is being requested.

b. What is the number of insurable structures that will be impacted by this shift or increase?______________

6. Have the floodway boundaries shifted or increased at any location compared to those shown on the effective FBFM or FIRM? .... ☐ Yes ☐ No

If yes, explain: N/A

7. If a V- zone has been designated, has it been delineated to extend landward to the heel of the primary frontal dune? ☐ Yes ☐ No

If no, explain: N/A

8. Manual or digital map submission:

☒ Manual

☐ Digital

Digital map submissions may be used to update digital FIRMs (DFIRMs). For updating DFIRMs, these submissions must be coordinated with FEMA Headquarters as far in advance of submission as possible.

2. EARTH FILL PLACEMENT

1. The fill is: ☐ Existing ☒ Proposed

2. Has fill been/will be placed in the regulatory floodway? .... ☐ Yes ☐ No N/A
If yes, please attach completed Riverine Hydraulic Analysis Form.

3. Has fill been/will be placed in floodway fringe *(area between the floodway and 100-year floodplain boundaries)*? .... ☐ Yes ☐ No N/A

If yes, then complete A, B, C, and D below.

A. Are fill slopes for granular materials steeper than one vertical on one-and-one-half horizontal? .... ☐ Yes ☐ No

If yes, justify steeper slopes ____________________

B. Is adequate erosion protection provided for fill slopes exposed to moving flood waters? *(Slopes exposed to flows with velocities of up to 5 feet per second (fps) during the 100-year flood must, at a minimum, be protected by a cover of grass, vines, weeds, or similar vegetation; slopes exposed to flows with velocities greater than 5 fps during the 100-year flood must, at a minimum, be protected by stone or rock riprap.)* .... ☐ Yes ☐ No

If no, describe erosion protection provided ____________________

C. Has all fill placed in revised 100-year floodplain been compacted to 95 percent of the maximum density obtainable with the Standard Proctor Test Method or acceptable equivalent method? ☐ Yes ☐ No

D. Can structures conceivably be constructed on the fill at any time in the future? ☐ Yes ☐ No

If yes, provide certification of fill compaction (item C. above) by the community's NFIP permit official, a registered professional engineer, or an accredited soils engineer.

4. Has fill been/will be placed in a V-zone? ☐ Yes ☐ No

N/A

If yes, is the fill protected from erosion by a flood control structure such as a revetment or seawall? ☐ Yes ☐ No

If yes, attach the coastal structures form.

FEDERAL EMERGENCY MANAGEMENT AGENCY **CHANNELIZATION FORM**	*O.M.B. Burden No. 3067-0148* *Expires July 31, 1994*	**FEMA USE ONLY**

PUBLIC BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 1.75 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden, to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

Community Name: CITIES OF MILPITAS & SAN JOSE, CA.
Flooding Source: COYOTE CREEK
Project Name/Identifier: COYOTE CREEK FLOOD CONTROL PROJECT

1. EXTENT OF CHANNELIZATION

Downstream limit: SAN FRANCISCO BAY
Upstream limit: MONTAGUE EXPRESSWAY

2. CHANNEL DESCRIPTION

1. Describe the inlet to the channel TRAPEZOIDAL ROCK-LINED CHANNEL ± 270 FEET U/S OF MONTAGUE EXPRESSWAY

2. Briefly describe the shape of the channel *(both cross sectional and planimetric configuration)* and its lining *(channel bottom and sides)*
X-SECTION: TRAPEZOIDAL
LINING: EARTHEN, CONCRETE, ROCK LINING ON BOTTOM & SIDES

3. Describe the outlet from the channel TRAPEZOIDAL EARTHEN CHANNEL AT THE EXISTING MILPITAS SEWAGE TREATMENT PLANT (LIMIT OF TIDAL ACTION)

4. The channelization includes:

   ☒ Levees *(Attach Levee Form)*
   ☐ Drop structures
   ☐ Superelevated sections
   ☐ Transitions in cross sectional geometry
   ☐ Debris basin/detention basin
   ☐ Energy dissipater
   ☐ Other

5. Attach the following:

   a. Certified engineering drawings showing channel alignment and locations of inlet, outlet, and items checked in item 4
   SEE ATTACHED AS-BUILT PLANS & CONSTRUCTION PLANS FOR BOTH Q5a & Q5b

   b. Typical cross sections and profiles of channel banks and invert

3. HYDRAULIC CONSIDERATIONS

1. What is the 100-year discharge? .... 12400 cfs

2. Do the cross sections in the hydraulic model match the typical cross sections in the plans? ☒ Yes ☐ No

3. Are the channel banks higher than the 100- year flood elevations everywhere? .... ☒ Yes ☐ No

4. Are the channel banks higher than the 100-year flood energy grade lines everywhere? .. ☒ Yes ☐ No

5. Is the land on both sides of the channel above the adjacent 100-year flood elevation at all points along the channel? .... ☐ Yes ☒ No

6. What is the range of freeboard? .... 3.2 - 6.6 feet

7. What is the range of the 100-year flood velocities? .... 1.18 - 15.06 ft/sec

8. What is the lining type? (both bottom and sides) EARTHEN, ROCK, & CONCRETE

   Explain how the channel lining prevents erosion and maintains channel stability *(attach documentation)*

   ROCK-LINED & CONCRETE FOR HIGH VELOCITIES AREA;
   CHANNEL STABILITY ANALYSIS IS ATTACHED.

9. What is the design elevation in the channel based on?

   ☒ Subcritical flow
   ☐ Critical flow
   ☐ Supercritical flow
   ☐ Energy grade line

   Is 100-year flood profile based on the above type of flow? .... ☒ Yes ☐ No

   If no, explain:

10. Is there the potential for a hydraulic jump at the following locations?

    Inlet to channel .... ☐ Yes ☒ No
    Outlet of channel .... ☐ Yes ☒ No
    At Drop Structures .... ☐ Yes ☒ No
    At Transitions .... ☐ Yes ☒ No
    Other locations. Explain:

    If the answer to any of the above is yes, please explain how the hydraulic jump is controlled and the effects of the hydraulic jump on the stability of the channel.

    Explain:

4. SEDIMENT TRANSPORT CONSIDERATIONS

1. A. Is there any indication from historical records that sediment transport (including scour and deposition) can affect the 100-year water surface elevations and/or the capacity of the channel? ..... ☐ Yes ☒ No

B. Based on the conditions of the watershed and stream bed, is there a potential for sediment transport (including scour and deposition) to affect the 100-year water surface elevations and /or the capacity of the channel? .... ☐ Yes ☒ No

2. If the answer to either 1A or 1B is yes:

A. What is the estimated sediment (bed) load?
__________cfs (attach gradation curve)

Explain method used to estimate load__________

B. Is the 100-year flood velocity anywhere within the channel less than the 100-year flood velocity of the inlet? ☐ Yes ☐ No

C. Will sediment accumulate anywhere within the channel? ☐ Yes ☐ No

D. Will deposition or scour occur at or near the inlet? ☐ Yes ☐ No

E. Will deposition or scour occur at or near the outlet? ☐ Yes ☐ No

Attach documentation showing affects on the Hydrologic and Hydraulic analyses

FEDERAL EMERGENCY MANAGEMENT AGENCY **LEVEE/FLOODWALL SYSTEM ANALYSES FORM**	*O.M.B. Burden No. 3067-0148* *Expires July 31, 1994*	FEMA USE ONLY

PUBLIC BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 3.0. hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and reviewing the form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden, to: Information Collections Management, Federal Emergency Management Agency, 500 C Street, S.W., Washington, DC 20472; and to the Office of Management and Budget, Paperwork Reduction Project (3067-0148), Washington, DC 20503.

Community Name: CITY OF SAN JOSE & MILPITAS, CA
Flooding Source: COYOTE CREEK
Project Name/Identifier: COYOTE CREEK FLOOD CONTROL PROJECT

REACH TO BE REVISED

Downstream limit: SAN FRANCISCO BAY
Upstream limit: MONTAGUE EXPRESSWAY

This Levee/Floodwall analysis is based on:

☐ upgrading of an existing levee/floodwall system
☒ a newly constructed levee/floodwall system
☐ reanalysis of an existing levee/floodwall system

LEVEE/FLOODWALL SYSTEM ELEMENTS

1. Levee elements and locations are:

☒ earthen embankment, dike, berm etc.	Station 490+00 to 735+00
☐ structural floodwall	Station ______ to ______
☐ other (describe)______	Station ______ to ______

Structural Type:

☒ monolithic cast-in place reinforced concrete
☐ reinforced concrete masonry block
☐ sheet piling
☒ other (describe) ROCK RIPRAP, EARTHEN FILL EMBANKMENT

2. Has this levee/floodwall system been certified by a Federal agency to provide protection against the 100-year flood event?

☒ Yes ☐ No

If yes, by which agency? US ARMY CORPS OF ENGINEERS

If yes, complete only the interior drainage section on pages 7 and 8 of this form and the operation and maintenance section of Revision Requestor and Community Official Form.

LEVEE/FLOODWALL SYSTEM ELEMENTS (Cont'd)

3. Attach certified drawings containing the following information (indicate drawing sheet numbers):

a. Plan of the levee embankment and floodwall structures. Sheet Numbers ____________

b. A profile of the levee/floodwall system showing the 100-year water surface elevation, levee and/or wall crest and foundation, and closure locations for the total levee system. Sheet Numbers ____________

SEE ATTACHED AS-BUILT PLANS & CONSTRUCTION PLANS

c. A profile of the 100-year water surface elevation, closure opening outlet and inlet invert elevations, type and size of opening, and kind of closure device. Sheet Numbers ____________

d. A layout detail for the embankment protection measures. Sheet Numbers ____________

e. Location, layout, and size and shape of the levee embankment features, foundation treatment, floodwall structure, closure structures, and pump stations. Sheet Numbers ____________

FREEBOARD

1. The minimum freeboard provided above the 100-year water surface elevation is:

Riverine

3.0 feet or more at the downstream end and throughout ☒ Yes ☐ No
3.5 feet or more at the upstream end ☒ Yes ☐ No
4.0 feet immediately upstream of all structures and constrictions ☑ Yes ☐ No

Coastal

1.0 foot above the height of the one percent wave for the 100-year stillwater surge elevation or maximum wave runup (whichever is greater). N/A ☐ Yes ☐ No

2.0 feet above 100-year stillwater surge elevation N/A ☐ Yes ☐ No

Please note, occasionally exceptions are made to the minimum freeboard requirement. If an exception is requested, attach documentation addressing Part 65.10 (b) (1) (ii) of the National Flood Insurance Program regulations.

If no is answered to any of the above, please explain where and why: ____________

2. Tabulate the elevations at critical locations (tabulate values at each levee crest grade change)

Station	Location	100-Year Water Surface Elevation	Levee Crest	Freeboard (ft.)
	Upper end			
SEE	HEC-2 SUMMARY ATTACHED			
	Lower end			

(Extend table on an added sheet as needed and reference)

SEDIMENT TRANSPORT CONSIDERATIONS

1. A. Is there any indication from historical records that sediment transport (including scour and deposition) can affect the 100-year water surface elevations?

☐ Yes ☒ No

B. Based on the conditions (such as geomorphology, vegetative cover and development of the watershed and stream bed, and bank conditions), is there a potential for debris and sediment transport (including scour and deposition) to affect the 100-year water surface elevations and/or the freeboard for the levee/floodwall?

☐ Yes ☒ No

2. If the answer to either 1A or 1B is yes:

A. What is the estimated sediment (bed material) load?

_______cfs (attach gradation curve)

Explain method used to estimate the sediment transport and the depth of scour and/or deposition

B. Will sediment accumulate anywhere along the levee/floodwall (such as along any bends in the channel)?

☐ Yes ☐ No

If yes, what is the minimum freeboard at these locations?________________feet.

CLOSURES

1. Openings through the levee system:

☒ exist ☐ do not exist

If openings exist, list all closures:

Channel Station	Left or Right Bank	Opening Type	Highest Elevation for Opening Invert	Type of Closure Device
522+70	EAST	24" CSP	9.82'	FLAP GATE
530+00	E.	24" CMP	9.9'	FLAP GATE
539+00	WEST	24" CMP	8.9'	FLAP GATE
583+00	W	24" CSP	20.7'	FLAP GATE

(Extend table on an added sheet as neded and reference)

Geotechnical and geologic data:

In addition to the required detail analysis reports, data obtained during field and laboratory investigations and used in the design analysis for the following levee system features should be submitted in a tabulated summary form. (Reference U.S. Army Corps of Engineers EM-1110-2-1906 Form 2086).

RELEVENT SOIL DATA IS INCLUDED IN THE SLOPE STABILITY ANALYSIS ATTACHED.

EMBANKMENT PROTECTION

1. The maximum levee slope landside is 2:1

2. The maximum levee slope floodside is 2:1

3. The range of 100-year riverine flood velocities along the levee? 1.18 fps (min.) to 15.06 fps (max.)

4. Embankment material is protected by (describe the kind): ROCK RIPRAP, CONCRETE LINING

5. Riprap Design Parameters: (Include references) ☐ Velocity; ☐ Tractive stress

Reach	Sideslope	Flow depth	fps Velocity	Curve or Straight	Stone Riprap D100	D50	Thickness	Depth of Toedown
Sta 510+00 to 512+84	2:1	15.70'	3.42	C	1/4 TON		3'	3'
Sta 534+00 to 535+30	2:1	17.45'	2.27	C	1/4 TON		3'	3'
Sta 586+00 to 59+00	3:1	18.42'	3.65	S	1/4 TON		3'	5'
727+70 to 739+00	2:1 to 3:1	16.82'	4.00	C	1/4 TON		1.5'	4'

(Extend table on an added sheet as needed and reference)

6. Has a bedding/filter analysis and design been included ☐ Yes ☒ No

Describe the analysis used for other kinds of protection used (include copies of the design analysis):

BEDDING MATERIAL WAS USED AS A FILTERING DEVICE ON ALL RIPRAP AREAS OF THE PROJECT. IT'S OUR STANDARD PRACTICE TO USE A FILTERING DEVICE TO STABILIZE THE ROCK SLOPE FOUNDATION.

Note: Attach engineering analysis to support construction plans.

CHANNEL SLOPE STABILITY ANALYSIS IS ATTACHED.

Santa Clara Valley Water District

5750 Almaden Expressway, San Jose 95118, Phone 265-2600

Subject COYOTE CREEK - REACH 2A.

Page ______ of ______

Charge No. ______

By TRI NGUYEN

Date 6-26-1995

Checked by ______ Date ______

SUMMARY OF SLOPE STABILITY ANALYSIS RESULTS:

I- LOCATION: AS BUILT - STA 18+00 TO 23+00

FEMA: 513+00 TO 519+00 (FEMA)

REF. SOIL BORING N° 19 AND BORING 21

CASE	TYPE	FILE	Ru	PHREATIC	CRACK	SURCHARGE (100 PSF)	SEISMIC		FS	REMARK
							ah	av		
1	END OF CONST.	COFE19A	0.5	NO	NO	YES	NO	NO	2.59	
2	FLOOD/DRAWD.	COFE19D	NO	YES	2	YES	NO	NO	2.91	
3	FLOOD/STEADY SEEP.	COFE 19F	NO	YES	2	YES	NO	NO	4.71 3.43	
4	FLOOD/PARTIAL SEEPAGE	COFE 19F	NO	NO	2	YES	NO	NO	3.52	
6	CASE 1 + SEISMIC	COFE 19E	0.5	NO	NO	YES	0.2	0.05	1.67	
6	CASE 3 + SEISMIC	COFE 19S	NO	YES	2	YES	0.2	0.05	2.36	

II- LOCATION: AS BUILT- STA 63+00

FEMA STA. 555+00

LOCATION NEAR BORING 23. (LOCALIZE POOR SOIL - SOFT BAY MUD)

CASE	TYPE	FILE	Ru	PHREATIC	CRACK	100 psf SURCH.	SEISMIC.		FS	REMARK
							ah	av		
1	END OF CONST.	COFE 23 A	0.5	NO	NO	YES	NO	NO	1.63	
2	FLOOD/DRAWDOWN	COFE 23 D	NO	YES	NO	YES	NO	NO	1.81	
3	FLOOD/STEADY SEEPAGE	COFE23F	NO	YES	NO	YES	NO	NO	2.70	
4	FLOOD/NO SEEPAGE	COFE 23 N	NO	NO	NO	YES	NO	NO	2.93	
6	CASE 1+ SEISMIC	COFE 23G	NO	NO	NO	YES	0.1	0.05	1.27	
6	CASE 1 + SEISMIC	COFE 23 E	NO	NO	NO	NO	0.12	0.05	1.06	
6	CASE 3 + SEISMIC	COFE 23Q	NO	YES	NO	YES	0.2	0.05	1.28	

EMBANKMENT AND FOUNDATION STABILITY

1. Describe the basis for selection of critical location for analysis:

FEMA sta 513+00

☐ Overall height: Sta 63+00, height 19 ft.

☑ Limiting foundation soil strength:

Sta ______, depth ______ to ______

strength Ø = 0 degrees, c = 400 psf (LOCALLY - SOFT BAY MUD)

☐ slope: SS = ______ (h) to ______ (v)

(Repeat as needed on an added sheet for additional locations)

2. Specify the embankment stability analyses methodology used (e.g. circular arc, sliding block, infinite slope, etc.): CIRCULAR ARC - SIMPLIFIED BISHOP

S.B. SLOPE PROGRAM

3. Summary of stability analysis results:

Case	Loading Conditions		Critical Safety Factor	Criteria (Min.)
I	End of construction		1.63	1.3
II	Sudden drawdown		1.81	1.0
III	Critical flood stage		2.70	1.4
IV	Steady seepage at flood stage		2.93	1.4
VI	Earthquake (Case I or III)	VI-/1 VI-/3	1.06 1.28	1.0

(Reference: U.S. Army Corps of Engineers EM-1110-2-1913 Table 6-1)

4. Was a seepage analysis for the embankment performed? ☐ Yes ☒ No

Describe methodology used: By inspection, all embankment fill was designed & constructed with imported impervious fill materials that have plasticity Index less than 25.

5. Was a seepage analysis for the foundation performed? ☐ Yes ☒ No

Were uplift pressures at the embankment landside toe checked? ☐ Yes ☒ No

Were seepage exit gradients checked for piping potential? ☐ Yes ☒ No

6. The duration of 100-year flood hydrograph against the embankment is < 24 Hrs.

Note: Attach engineering analysis to support construction plans.

Santa Clara Valley Water District
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Page 1 of

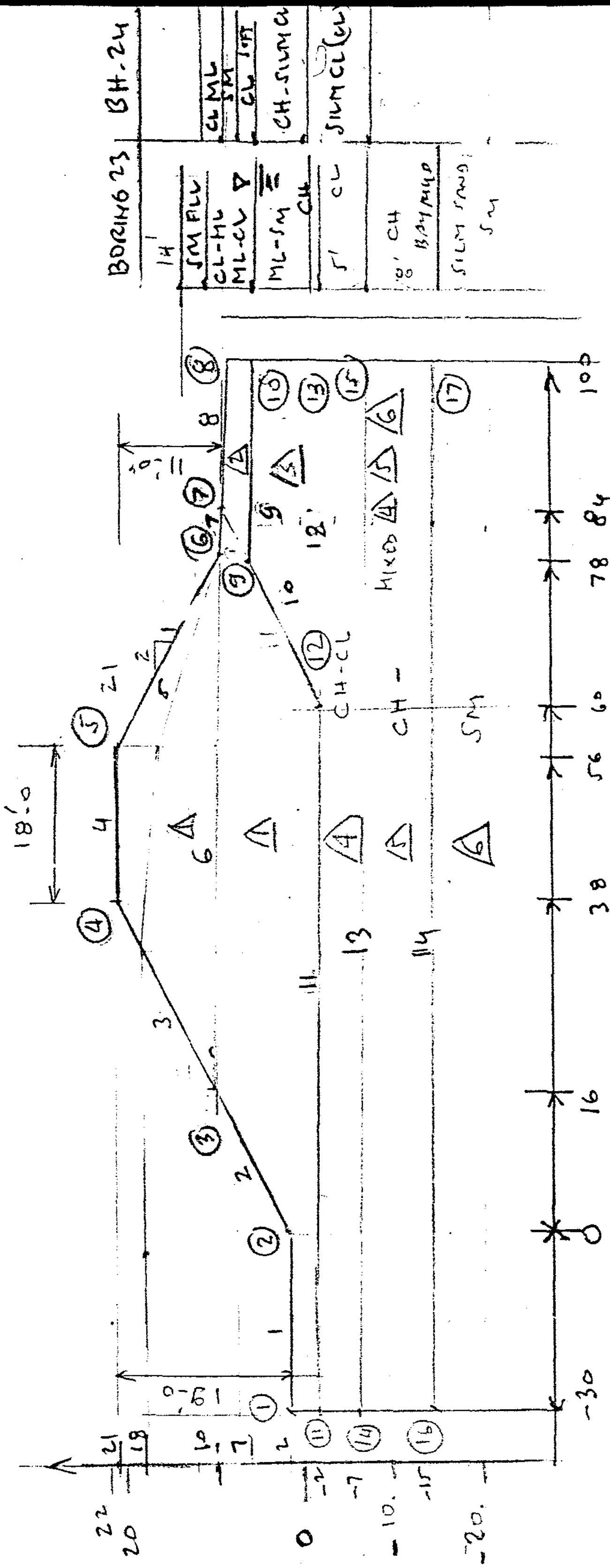
Charge No.

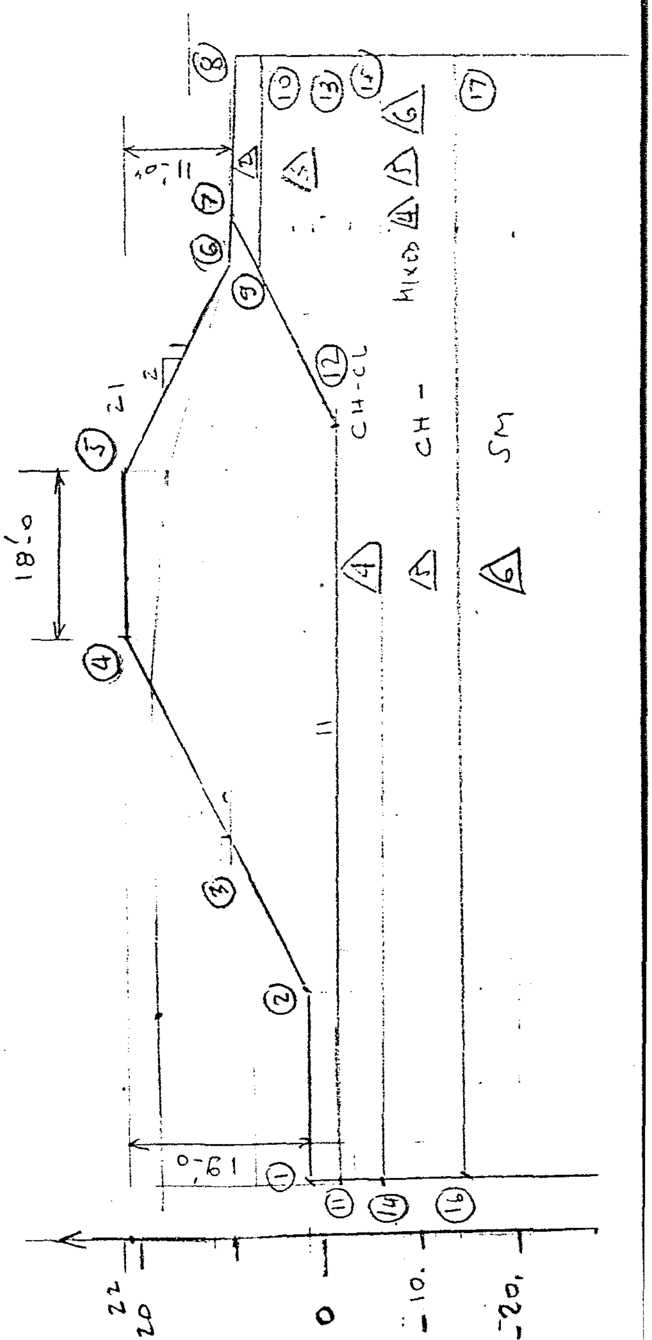
By TRI - NGUYEN

Date 6-12-95

Subject COYOTE - / FEMA - LOMR - BORING 23
STA 450+

Checked by Date





20

10

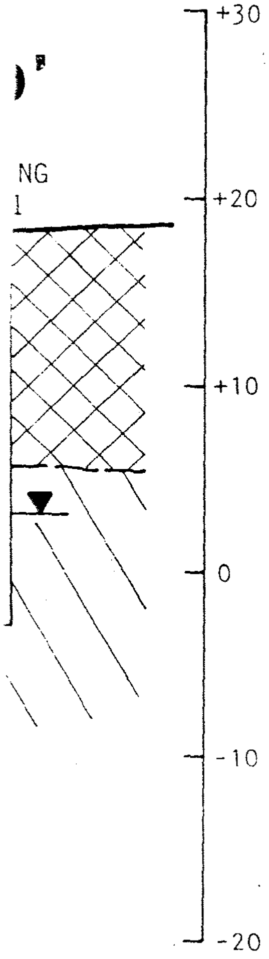
0

-10

-20

NOTES:

1. See Figures 1a through 1c for sections and boring locations.
2. The Idealized Soil Profile has been constructed by direct interpolation between borings drilled at varying spacings and projected to the section line. The dashed lines connecting the various layers at each boring location are for schematic illustration purposes only and should not be construed to represent the actual conditions in the field. Gradational changes shown within the various layers should alsa be considered approximate.
3. For detailed descriptions of materials encountered in each boring drilled during this investigation, see Figures A-1 through A-40.
4. The existing grade indicated was taken from topographic information provided by the Santa Clara Valley Water District, dated June 1983.



LEGEND:

▼ WATER LEVEL RECORDED DURING DRILLING FOR THIS INVESTIGATION

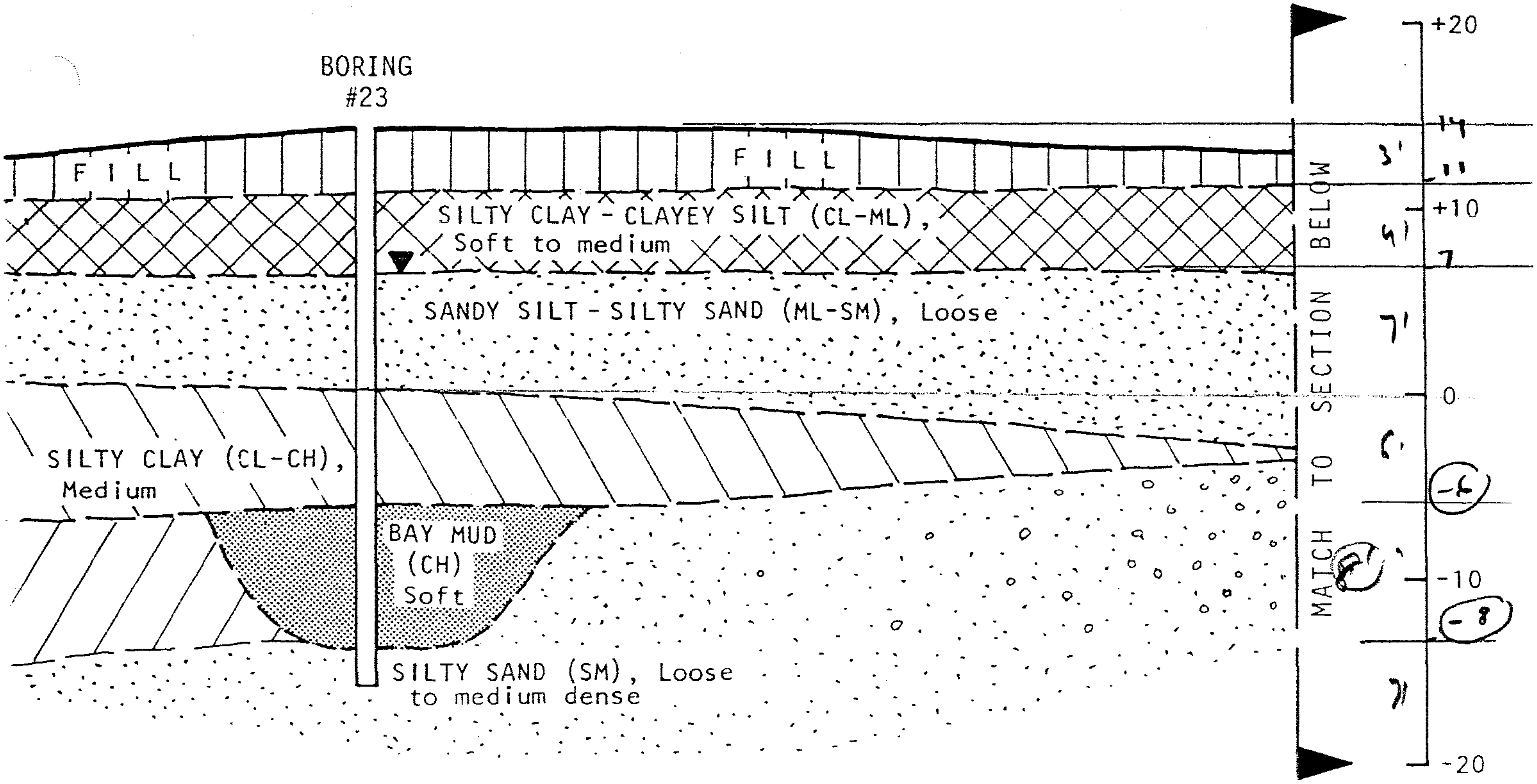
HORIZONTAL SCALE IN FEET

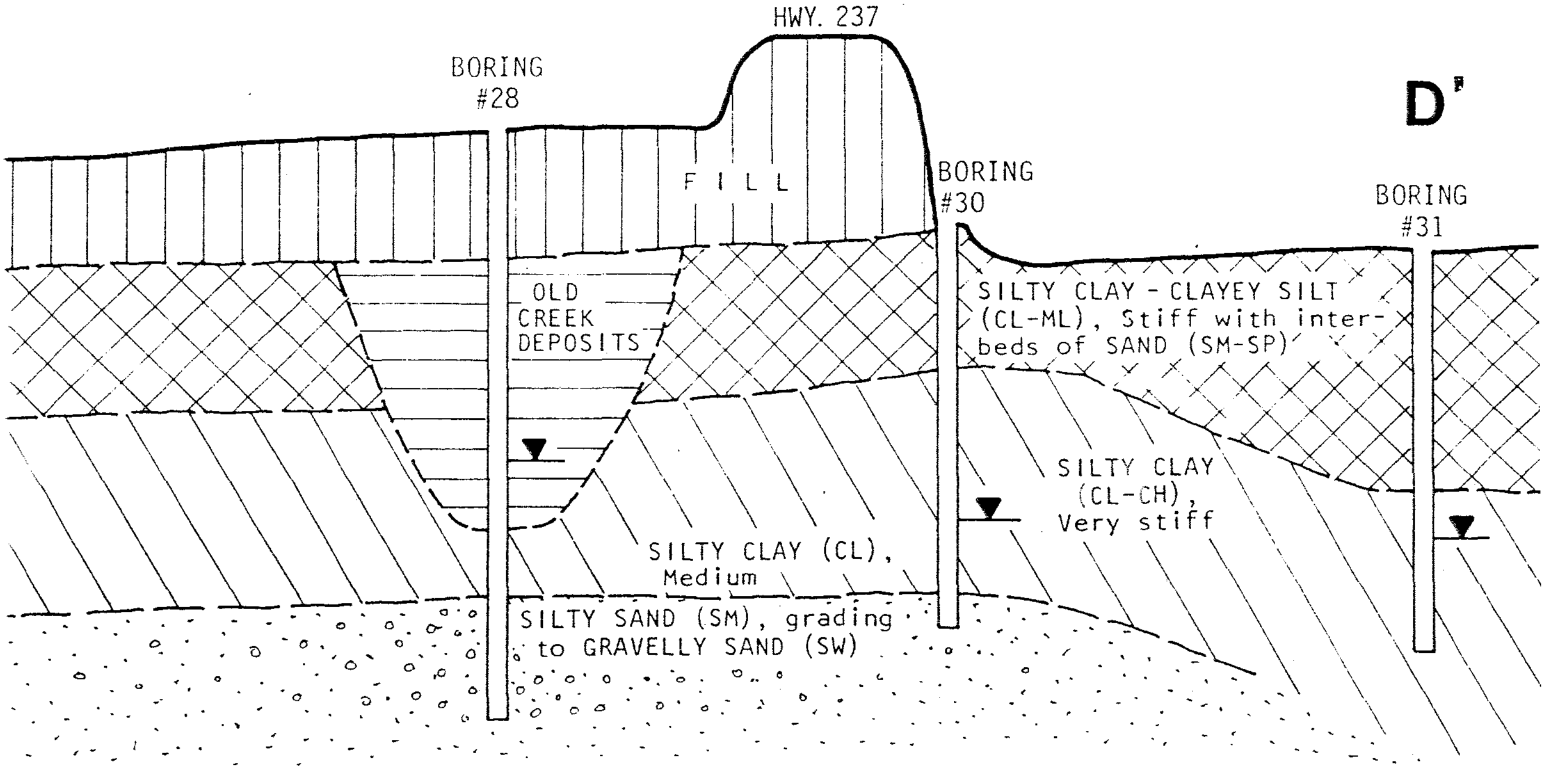
Vertical Exaggeration = 20X

SECTION D-D'
IDEALIZED SOIL PROFILE - REACH 2
MILPITAS SANITATION DIST. TO HWY. 237
COYOTE CREEK IMPROVEMENTS
Santa Clara County, California

Project No. 15945W
Woodward-Clyde Consultants

Figure 3d


BORING #23
FILL
FILL
SILTY CLAY - CLAYEY SILT (CL-ML), Soft to medium
SANDY SILT - SILTY SAND (ML-SM), Loose
SILTY CLAY (CL-CH), Medium
BAY MUD (CH) Soft
SILTY SAND (SM), Loose to medium dense
MATCH TO SECTION BELOW
+20
14
3'
11
+10
4'
7
7'
0
6'
-6
-10
-8
7'
-20


HWY. 237
D'
BORING #28
FILL
BORING #30
BORING #31
OLD CREEK DEPOSITS
SILTY CLAY - CLAYEY SILT (CL-ML), Stiff with interbeds of SAND (SM-SP)
SILTY CLAY (CL-CH), Very stiff
SILTY CLAY (CL), Medium
SILTY SAND (SM), grading to GRAVELLY SAND (SW)

See Fig-3D   1kg/cm² = 14.223 psi   ML =2048 psf   1.019 kg/cm² = 14,495 psi -

Project: COYOTE CREEK IMPROVEMENTS
Santa Clara County, California

Log of Boring No. 23

Date Drilled: September 13 & 19, 1983
Type of Boring: 6-inch auger
Hammer Weight: 140 lbs.
Remarks:
(See Legend Sheet for sampler types and hammer weights)

Surface Elevation: 14½± feet

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION Density, Cohesion, Phi	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf
5' CL-ML	1	4	① SILTY SAND FILL (SM) Poorly compacted, moist, brown k = 2.9 × 10⁻⁴ (cm/sec) (FILL) φ = 25-27° -#200 = 39%	15	92	590
5	2	4	② SILTY CLAY - CLAYEY SILT (CL-ML) Soft, moist, brown Medium ✓ 1.9 × 10⁻⁶ c = 500 φ = 7°	21	101	1510
	3	5	③ Grading to sandy clayey Silt (ML-CL) ATD 2	24	95	-
ML-SM	4	7	④ SANDY SILT - SILTY SAND (ML-SM) -#200 = 53% Loose, brown	-	-	-
10	5	11	Medium ? 1.9 × 10⁻⁶ 2.9 × 10⁻⁴ 5.6 × 10⁻⁷ -#200 = 61% 3 φ = 27-30°	-	-	-
	6	6	⑤ SILTY CLAY (CH) Medium, dark gray mottled 8.8 × 10⁻⁹	~~20~~	98	-
15 CL-CH			⑥ SILTY CLAY (CL) Medium, gray and olive mottled C = ? Becoming more plastic (CL-CH), with traces of organic material 4.4 × 10⁻⁶			
	7	10	φ = 7-10°	27	98	1170
20			8.8 × 10⁻⁹ ⑦ SILTY CLAY (CH) C_SAT = 250 Soft, dark gray, with traces of organic material φ = 0			
8' CH	8	-	(BAY MUD)	52	69	490
25			1kg/cm² ≈ 2 KSF ≈ 69 (1.52) = 104 (98) = 104			
SM	9	-	⑧ SILTY SAND (SM) Loose to medium dense γ = 115 φ = 25 c = 0	-	-	-
30			BOTTOM OF BORING @ 30 feet			

Proj. No. 15945W   **Woodward-Clyde Consultants**   Figure A-26

Project: COYOTE CREEK IMPROVEMENTS
Santa Clara County, California

Log of Boring No. 24

Date Drilled: September 20, 1983
Type of Boring: 6-inch auger
Hammer Weight: 140 lbs.

Remarks:

(See Legend Sheet for sampler types and hammer weights)

Surface Elevation: 12± feet

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION	Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf
	1	5	SILTY CLAY - CLAYEY SILT (CL-ML) Medium, moist, brown, very silty PI = 9	22	98	1320
	2	2	SILTY SAND (SM) Very loose, moist, brown Grading finer -#200 = 25%	-	-	-
5						
	3	5	SILTY CLAY (CL) Soft to medium, wet, dark gray-brown ▽ ATD	-	-	-
	4	12	SILTY CLAY (CH) Stiff, dark brown-gray	24	97	3260
10			5			
	5	18		23	101	3170
	6	12	SILTY CLAY (CL) Stiff, light brown mottled	26	97	2440
15						
			8			
	7	10		-	-	-
20			BOTTOM OF BORING @ 20 feet			
25						
30						

Proj. No. 15945W

Woodward-Clyde Consultants

Figure A-27

```
COFE23F - critical flood stage, steady seepage case 3a
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=    65.0    X increment =     1.0
First Y=    25.0    Y increment =     1.0
Minimum radius=    38.0    radius increment =     1.0


Minimum FS found during automatic search = 2.70
Found at X=  65.0, Y=  25.0, R=  38.0
```

```
COFE23F - critical flood stage, steady seepage case 3a
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   16.0   X increment =    1.0
First Y=   38.0   Y increment =    1.0
Minimum radius=   50.0   radius increment =    1.0


Minimum FS found during automatic search = 2.93
Found at X=  16.0, Y=  38.0, R=  50.0



                                        SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A
Location: Station 63+00, near boring 23 with reference boring 24
Filename: COFE23F   Description: critical flood stage, steady seepage case 3a

ANALYSIS DATA
Line    Left      Left      Right     Right     Density   Cohesion  Phi    Phreatic
No.     X         Y         X         Y         pcf       psf       Deg    Line
  1      -30.0       2.0       0.0       2.0    130.0      1300      0     N
  2        0.0       2.0      16.0      10.0    130.0      1300      0     N
  3       16.0      10.0      38.0      21.0    130.0      1300      0     N
  4       38.0      21.0      56.0      21.0    130.0      1300      0     N
  5       56.0      21.0      78.0      10.0    130.0      1300      0     N
  6       16.0      10.0      78.0      10.0    130.0      1300      0     N
  7       78.0      10.0      84.0      10.0    120.0       600      7     N
  8       84.0      10.0     100.0      10.0    120.0       600      7     N
  9       78.0       7.0     100.0       7.0    120.0        50     27     N
 10       60.0      -2.0      78.0       7.0    120.0        50     27     N
 11      -30.0      -2.0      60.0      -2.0    120.0       600      0     N
 12       60.0      -2.0     100.0      -2.0    120.0       600      0     N
 13      -30.0      -7.0     100.0      -7.0    105.0       400      0     N
 14      -30.0     -15.0     100.0     -15.0    115.0         0     27     N
 15      -30.0      18.0      32.0      18.0     62.4         0      0     N
 16       32.0      18.0      56.0      16.0    130.0      1300      0     Y
 17       56.0      16.0      78.0      10.0    130.0      1300      0     Y

Distributed loads
No.  Left X  Right X  Load (lbf/ft)
 1     38.0    56.0    100.0
```

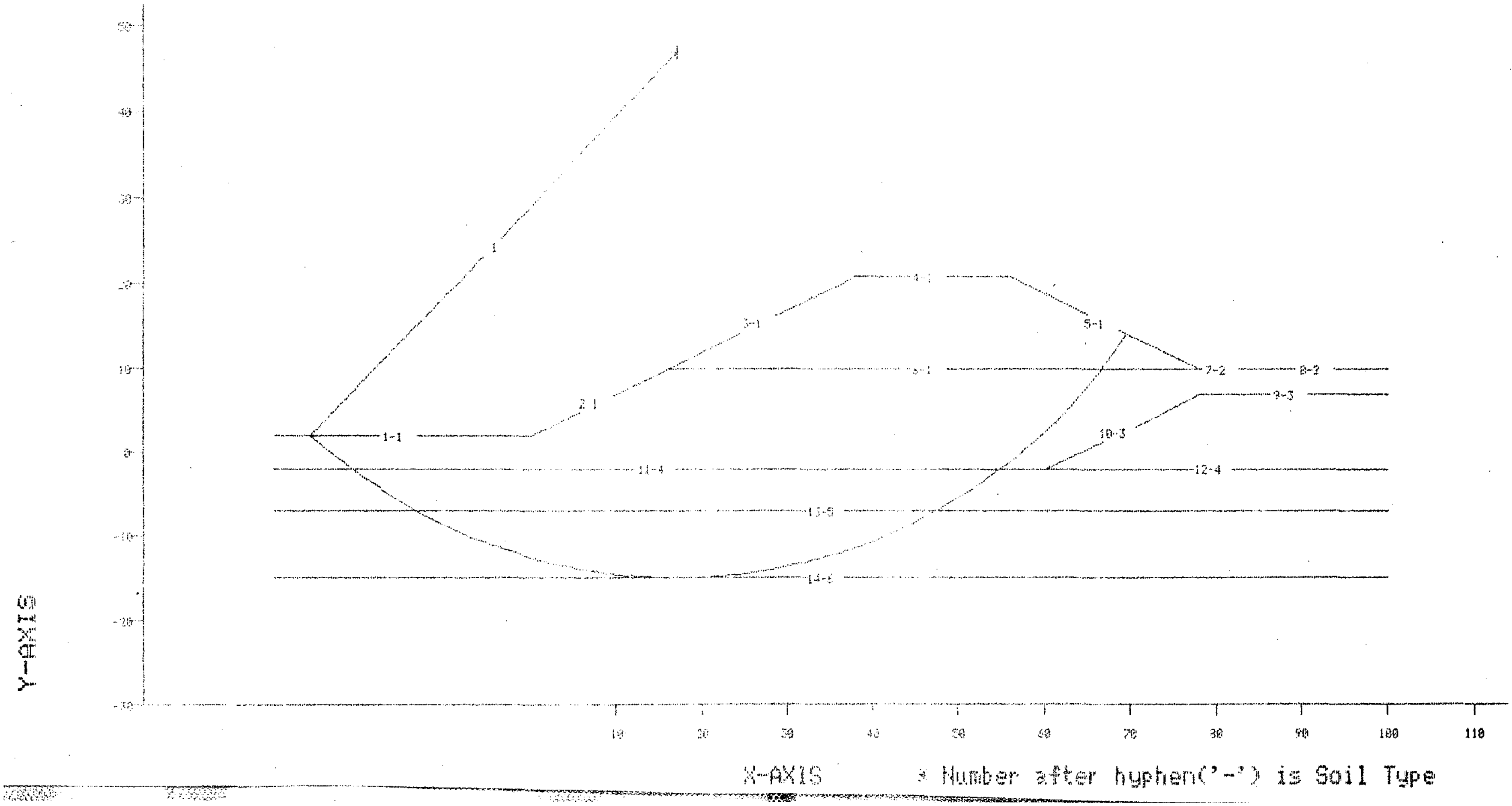
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A
LOCATION: Station 63+00, near boring 23 with reference boring 24
FILE: COFE23E
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	17.0	47.0	62.0	1.28

SOIL*	DENSITY	COHESION	PHI
1	130.0	1300.0	0.0
2	120.0	600.0	7.0
3	120.0	50.0	27.0
4	120.0	600.0	0.0
5	105.0	400.0	0.0
6	115.0	0.0	30.0



* Number after hyphen('-') is Soil Type

f- COFE 23E-/CASE 3 (case 1+seismic)
FINAL

```
COFE23E - end of construction, earthquake, case 6
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   17.0   X increment =    1.0
First Y=   47.0   Y increment =    1.0
Minimum radius=   62.0   radius increment =    1.0


Minimum FS found during automatic search = 1.28
Found at X=  17.0, Y=  47.0, R=  62.0



                                                SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A
Location: Station 63+00, near boring 23 with reference boring 24
Filename: COFE23E   Description: end of construction, earthquake, case 6

ANALYSIS DATA
Line    Left      Left      Right     Right     Density   Cohesion  Phi
No.     X         Y         X         Y         pcf       psf       Deg
  1       -30.0       2.0       0.0       2.0   130.0      1300      0
  2         0.0       2.0      16.0      10.0   130.0      1300      0
  3        16.0      10.0      38.0      21.0   130.0      1300      0
  4        38.0      21.0      56.0      21.0   130.0      1300      0
  5        56.0      21.0      78.0      10.0   130.0      1300      0
  6        16.0      10.0      78.0      10.0   130.0      1300      0
  7        78.0      10.0      84.0      10.0   120.0       600      7
  8        84.0      10.0     100.0      10.0   120.0       600      7
  9        78.0       7.0     100.0       7.0   120.0        50     27
 10        60.0      -2.0      78.0       7.0   120.0        50     27
 11       -30.0      -2.0      60.0      -2.0   120.0       600      0
 12        60.0      -2.0     100.0      -2.0   120.0       600      0
 13       -30.0      -7.0     100.0      -7.0   105.0       400      0
 14       -30.0     -15.0     100.0     -15.0   115.0         0     30

Horizontal earthquake coefficient = 0.1
Vertical earthquake coefficient = 0.05
```

SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A

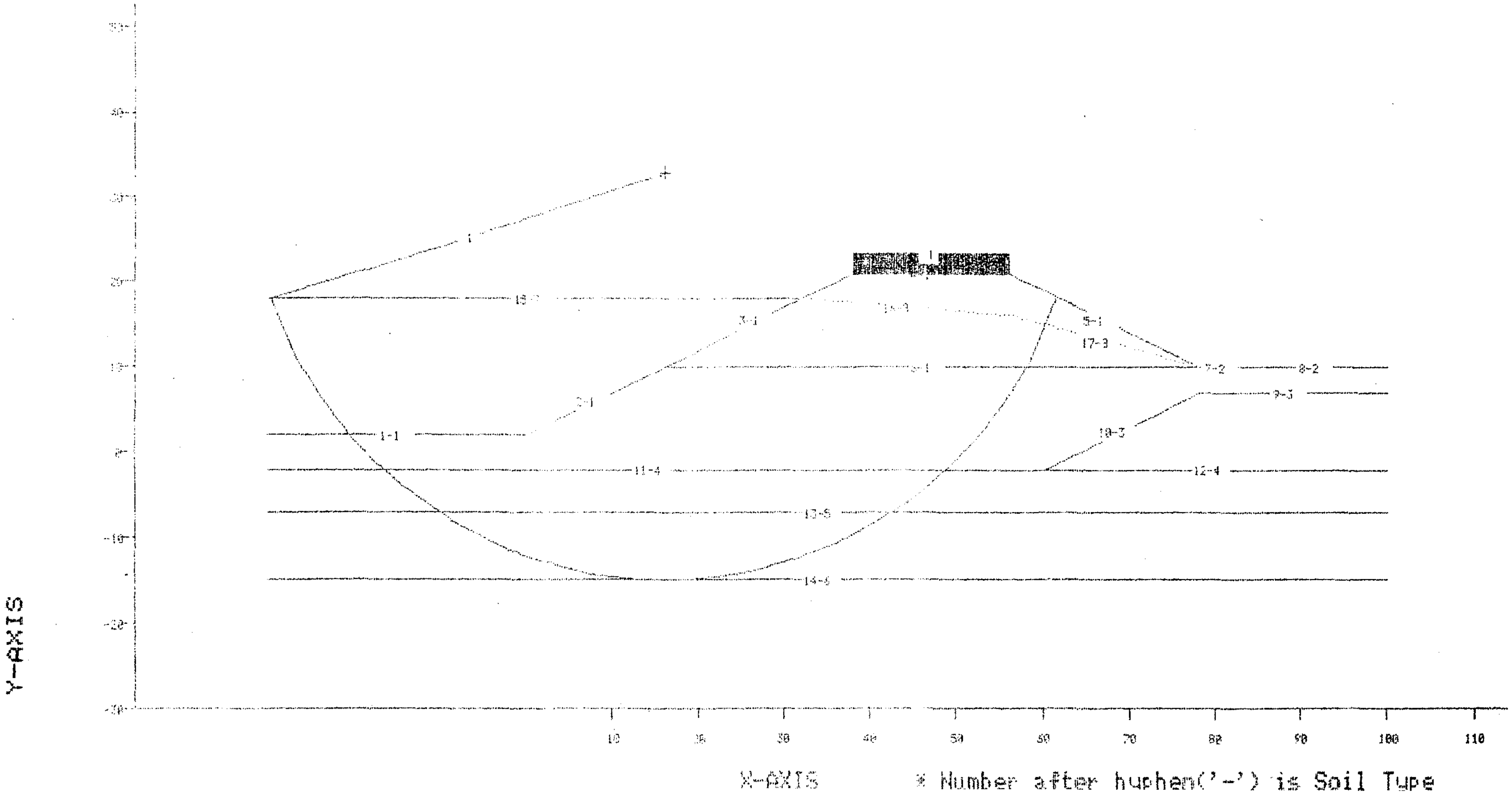
LOCATION: Station 63+00, near boring 23 with reference boring 24

FILE: COFE23Q

COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	16.0	33.0	48.0	1.34

SOIL *	DENSITY	COHESION	PHI
1	130.0	1300.0	0.0
2	120.0	600.0	7.0
3	120.0	50.0	27.0
4	120.0	600.0	0.0
5	105.0	400.0	0.0
6	115.0	0.0	27.0
7	62.4	0.0	0.0
8	130.0	1300.0	0.0



* Number after hyphen('-') is Soil Type

Santa Clara Valley Water District
5750 Almaden Expressway, San Jose 95118, Phone 265-2600

Subject ______________________

Page ________ of ________
Charge No. ________
By ________
Date ________
Checked by ________ Date ________

From COFE 23 Q. Case 6.
(case 3 e seismic

SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A
Location: Station 63+00, near boring 23 with reference boring 24
Filename: COFE23Q Description: critical flood, earthquake, case 6a

ANALYSIS DATA

Line No.	Left X	Left Y	Right X	Right Y	Density pcf	Cohesion psf	Phi Deg	Phreatic Line
1	-30.0	2.0	0.0	2.0	130.0	1300	0	N
2	0.0	2.0	16.0	10.0	130.0	1300	0	N
3	16.0	10.0	38.0	21.0	130.0	1300	0	N
4	38.0	21.0	56.0	21.0	130.0	1300	0	N
5	56.0	21.0	78.0	10.0	130.0	1300	0	N
6	16.0	10.0	78.0	10.0	130.0	1300	0	N
7	78.0	10.0	84.0	10.0	120.0	600	7	N
8	84.0	10.0	100.0	10.0	120.0	600	7	N
9	73.0	7.0	100.0	7.0	120.0	50	27	N
10	60.0	-2.0	73.0	7.0	120.0	50	27	N
11	-30.0	-2.0	60.0	-2.0	120.0	600	0	N
12	60.0	-2.0	100.0	-2.0	120.0	600	0	N
13	-30.0	-7.0	100.0	-7.0	105.0	400	0	N
14	-30.0	-15.0	100.0	-15.0	115.0	0	27	N
15	-30.0	18.0	32.0	18.0	62.4	0	0	N
16	32.0	18.0	56.0	16.0	130.0	1300	0	Y
17	56.0	16.0	73.0	10.0	130.0	1300	0	Y

Horizontal earthquake coefficient = 0.2
Vertical earthquake coefficient = 0.05

Distributed loads

No.	Left X	Right X	Load (lbf/ft)
1	38.0	56.0	100.0

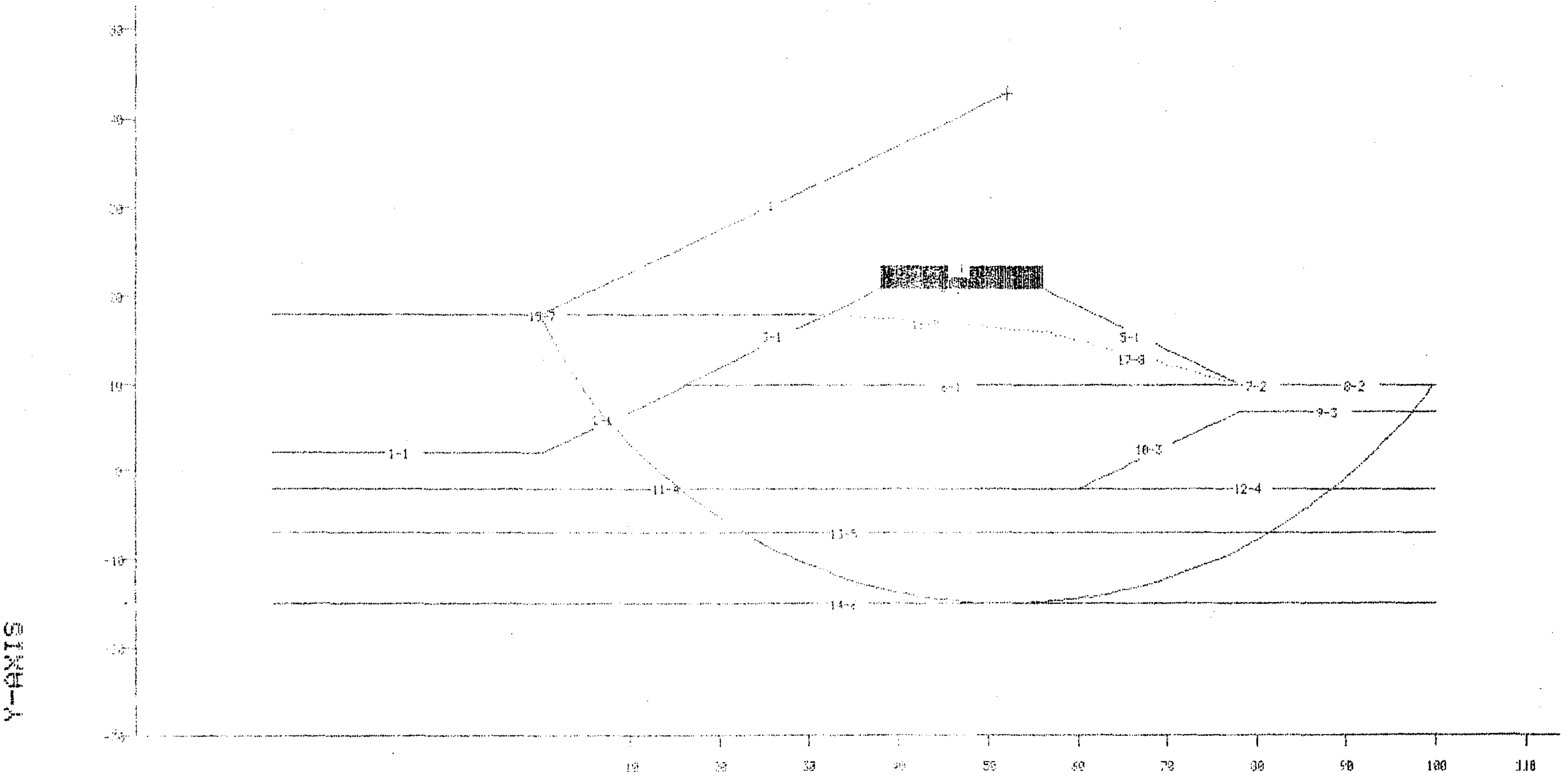
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A
LOCATION: Station 63+00, near boring 23 with reference boring 24
FILE: COFE23Q
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	52.0	43.0	56.0	1.28

SOIL*	DENSITY	COHESION	PHI
1	130.0	1300.0	0.0
2	120.0	600.0	7.0
3	120.0	50.0	27.0
4	120.0	600.0	0.0
5	105.0	400.0	0.0
6	115.0	0.0	27.0
7	62.4	0.0	0.0
8	130.0	1300.0	0.0



* Number after hyphen('-') is Soil Type

```
COFE23Q - critical flood, earthquake, case 6a
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   52.0   X increment =    1.0
First Y=   43.0   Y increment =    1.0
Minimum radius=   58.0  radius increment =    1.0


Circle center at X=  52.0, Y=  43.0
FS= 1.283 at R=  58.0
Radius too large at R=  59.0
Minimum FS for center = 1.283 at R=  58.0

Circle center at X=  53.0, Y=  43.0
Radius too large at R=  58.0
No valid circles at this center

Circle center at X=  53.0, Y=  42.0
Radius too large at R=  58.0
No valid circles at this center

Circle center at X=  52.0, Y=  42.0
Radius too large at R=  58.0
No valid circles at this center

Circle center at X=  51.0, Y=  42.0
FS= 1.592 at R=  58.0
Radius too large at R=  59.0
Minimum FS for center = 1.592 at R=  58.0

Circle center at X=  51.0, Y=  43.0
FS= 1.295 at R=  58.0
FS= 1.578 at R=  59.0
Minimum FS for center = 1.295 at R=  58.0

Circle center at X=  51.0, Y=  44.0
FS= 1.318 at R=  58.0
FS= 1.285 at R=  59.0
Radius too large at R=  60.0
Minimum FS for center = 1.285 at R=  59.0

Circle center at X=  52.0, Y=  44.0
FS= 1.306 at R=  58.0
Radius too large at R=  59.0
Minimum FS for center = 1.306 at R=  58.0

Circle center at X=  53.0, Y=  44.0
FS= 1.295 at R=  58.0
Radius too large at R=  59.0
Minimum FS for center = 1.295 at R=  58.0

Minimum FS found during automatic search = 1.28
Found at X=  52.0, Y=  43.0, R=  58.0
```

```
PROJECT DATA
```

```
Filename: [illegible]  Description: [illegible]

ANALYSIS DATA
Line   Left      Left      Right     Right     Density   Cohesion  Phi   Phreati
No.    X         Y         X         Y         pcf       psf       Deg   Line
  1    -30.0       2.0       0.0       2.0     130.0      1300      0     N
  2      0.0       2.0      16.0      10.0     130.0      1300      0     N
  3     16.0      10.0      38.0      21.0     130.0      1300      0     N
  4     38.0      21.0      56.0      21.0     130.0      1300      0     N
  5     56.0      21.0      78.0      10.0     130.0      1300      0     N
  6     16.0      10.0      78.0      10.0     130.0      1300      0     N
  7     78.0      10.0      84.0      10.0     120.0       600      7     N
  8     84.0      10.0     100.0      10.0     120.0       600      7     N
  9     78.0       7.0     100.0       7.0     120.0        50     27     N
 10     60.0      -2.0      78.0       7.0     120.0        50     27     N
 11    -30.0      -2.0      60.0      -2.0     120.0       600      0     N
 12     60.0      -2.0     100.0      -2.0     120.0       600      0     N
 13    -30.0      -7.0     100.0      -7.0     105.0       400      0     N
 14    -30.0     -15.0     100.0     -15.0     115.0         0     27     N
 15    -30.0      18.0      32.0      18.0      62.4         0      0     N
 16     32.0      18.0      56.0      16.0     130.0      1300      0     Y
 17     56.0      16.0      78.0      10.0     130.0      1300      0     Y

Horizontal earthquake coefficient = 0.2
Vertical earthquake coefficient = 0.05

Distributed loads
No.   Left X   Right X   Load (lbf/ft)
 1     38.0     56.0      100.0
```

Case - 4 - Flood - No Seepage
See Case 3 Simila
COFE23 N.

```
COFE23N - critical flood, case4 no seepage
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   16.0   X increment =    1.0
First Y=   38.0   Y increment =    1.0
Minimum radius=   50.0   radius increment =    1.0


Minimum FS found during automatic search = 2.93
Found at X=  16.0, Y=  38.0, R=  50.0



                              SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A
Location: Station 63+00, near boring 23 with reference boring 24
Filename: COFE23N   Description: critical flood, case4 no seepage

ANALYSIS DATA
Line    Left      Left      Right     Right     Density   Cohesion   Phi
No.     X         Y         X         Y         pcf       psf        Deg
  1      -30.0       2.0       0.0       2.0    130.0      1300        0
  2        0.0       2.0      16.0      10.0    130.0      1300        0
  3       16.0      10.0      38.0      21.0    130.0      1300        0
  4       38.0      21.0      56.0      21.0    130.0      1300        0
  5       56.0      21.0      78.0      10.0    130.0      1300        0
  6       16.0      10.0      78.0      10.0    130.0      1300        0
  7       78.0      10.0      84.0      10.0    120.0       600        7
  8       84.0      10.0     100.0      10.0    120.0       600        7
  9       78.0       7.0     100.0       7.0    120.0        50       27
 10       60.0      -2.0      78.0       7.0    120.0        50       27
 11      -30.0      -2.0      60.0      -2.0    120.0       600        0
 12       60.0      -2.0     100.0      -2.0    120.0       600        0
 13      -30.0      -7.0     100.0      -7.0    105.0       400        0
 14      -30.0     -15.0     100.0     -15.0    115.0         0       27
 15      -30.0      18.0      32.0      18.0     62.4         0        0
 16       32.0      18.0      56.0      16.0    130.0      1300        0
 17       56.0      18.0      78.0      10.0    130.0      1300        0

Distributed loads
No.  Left X  Right X  Load (lbf/ft)
 1     38.0    56.0    100.0
```

FINAL, case 2.

COFE23D. / FLOOD - STEADY SEEPAG

14' - DRAWDOWN

```
COFE23D - flood, sudden drawdown 14' feet ,levee satura
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   17.0   X increment =    1.0
First Y=   35.0   Y increment =    1.0
Minimum radius=   50.0   radius increment =    1.0


Minimum FS found during automatic search = 1.81
Found at X=  17.0, Y=  35.0, R=  50.0



                                    SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A
Location: Station 63+00, near boring 23 with reference boring 24
Filename: COFE23D   Description: flood, sudden drawdown 11 feet ,levee satu

ANALYSIS DATA
Line    Left      Left      Right     Right     Density   Cohesion   Phi    Phreati
No.     X         Y         X         Y         pcf       psf        Deg    Line
  1     -30.0       2.0       0.0       2.0     130.0      1300       0     N
  2       0.0       2.0      16.0      10.0     130.0      1300       0     N
  3      16.0      10.0      38.0      21.0     130.0      1300       0     N
  4      38.0      21.0      56.0      21.0     130.0      1300       0     N
  5      56.0      21.0      78.0      10.0     130.0      1300       0     N
  6      16.0      10.0      78.0      10.0     130.0      1300       0     N
  7      78.0      10.0      84.0      10.0     120.0       600       7     N
  8      84.0      10.0     100.0      10.0     120.0       600       7     N
  9      78.0       7.0     100.0       7.0     120.0        50      27     N
 10      60.0      -2.0      78.0       7.0     120.0        50      27     N
 11     -30.0      -2.0      60.0      -2.0     120.0       600       0     N
 12      60.0      -2.0     100.0      -2.0     120.0       600       0     N
 13     -30.0      -7.0     100.0      -7.0     105.0       400       0     N
 14     -30.0     -15.0     100.0     -15.0     115.0         0      27     N
 15     -30.0       7.0      10.0       7.0      62.4         0       0     N
 16      38.0      16.0      56.0      16.0     130.0      1300       0     Y
 17      56.0      16.0      78.0      10.0     130.0      1300       0     Y

Distributed loads
No.   Left X   Right X   Load (lbf/ft)
 1     38.0     56.0      100.0
```

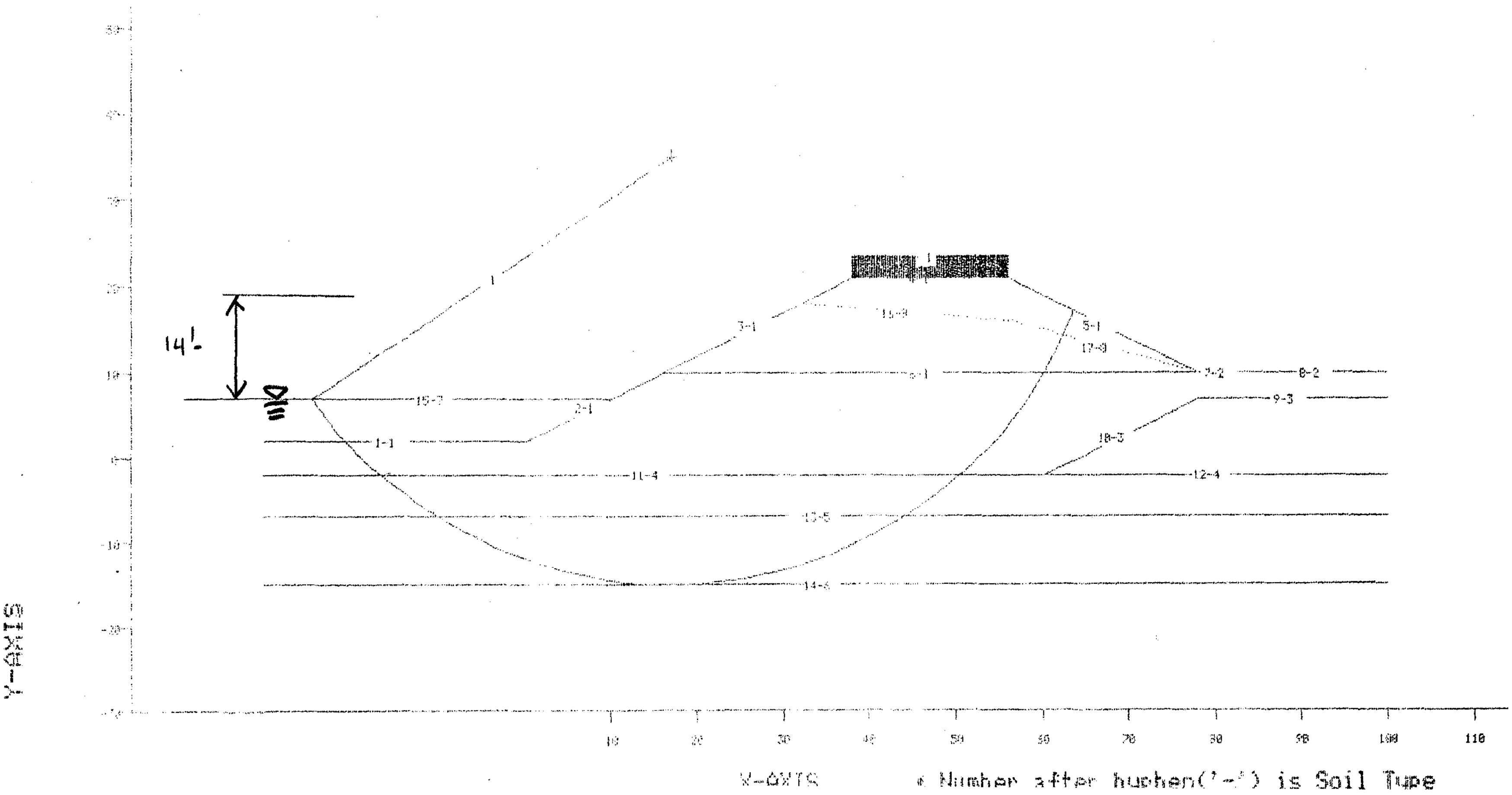
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A
LOCATION: Station 63+00, near boring 23 with reference boring 24
FILE: COFE23D
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	17.0	35.0	50.0	1.81

SOIL*	DENSITY	COHESION	PHI
1	130.0	1300.0	0.0
2	120.0	600.0	7.0
3	120.0	50.0	27.0
4	120.0	600.0	0.0
5	105.0	400.0	0.0
6	115.0	0.0	27.0
7	62.4	0.0	0.0
8	130.0	1300.0	0.0



* Number after hyphen('-') is Soil Type

Project: COYOTE CREEK IMPROVEMENTS
Santa Clara County, California

Log of Boring No. 23

Date Drilled: September 13 & 19, 1983
Type of Boring: 6-inch auger
Hammer Weight: 140 lbs.
Remarks:
(See Legend Sheet for sampler types and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION Density, Cohesion, Phi	LABORATORY TESTS Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf
			Surface Elevation: 14½± feet			
			① SILTY SAND FILL (SM) Poorly compacted, moist, brown			
	1 ▨	4	-#200 = 39% (FILL)	15	92	590
			② SILTY CLAY - CLAYEY SILT (CL-ML) 1.9 x10^{-6} Soft, moist, brown			
5	2 ▨	4	Medium	21	101	1510
			③ Grading to sandy clayey Silt (ML-CL)			
	3 ▨	5	▽ ATD	24	95	-
			④ SANDY SILT - SILTY SAND (ML-SM)			
	4 ☐	7	Loose, brown -#200 = 53%	-	-	-
10						
	5 ▨	11	-#200 = 61%	-	-	-
	6 ☐	6	⑤ SILTY CLAY (CH) .8 X10 Medium, dark gray mottled	-	-	-
15						
			⑥ SILTY CLAY (CL) Medium, gray and olive mottled Becoming more plastic (CL-CH), with traces of organic material			
	7 ▨	10		27	98	1170
20						
			⑦ SILTY CLAY (CH) Soft, dark gray, with traces of organic material			
	8 ▨	-	(BAY MUD)	52	69	490
25						
			⑧ SILTY SAND (SM) Loose to medium dense			
	9 ▨	-		-	-	-
30			BOTTOM OF BORING @ 30 feet			

Proj. No. 15945W

Woodward·Clyde Consultants

Figure A-2

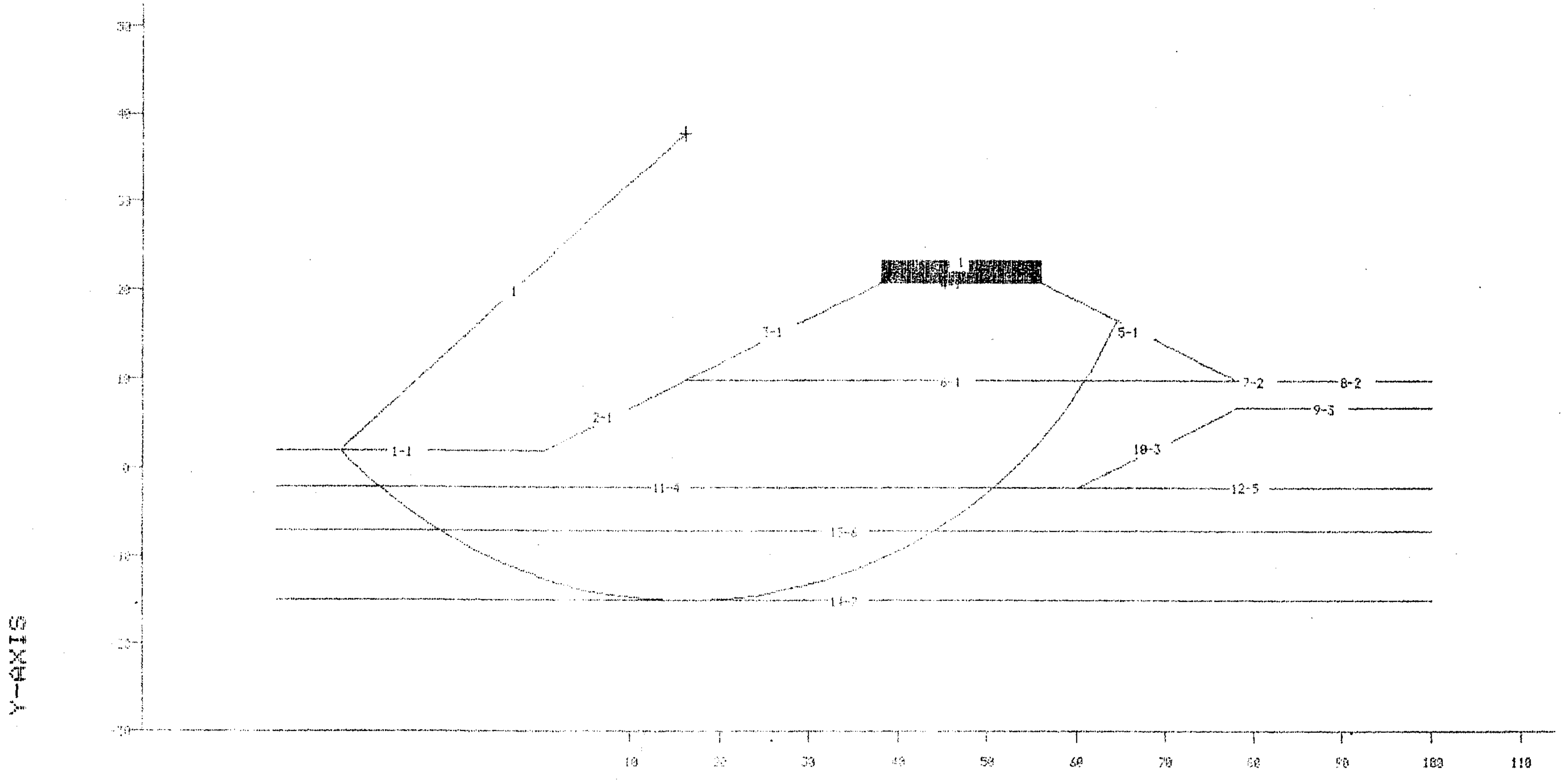
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A
LOCATION: Station 63+00, near boring 23 with reference boring 24
FILE: COFE23A
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	16.0	38.0	53.0	1.71

SOIL*	DENSITY	COHESION	PHI	RU
1	130.0	1300.0	0.0	0.5
2	120.0	600.0	7.0	0.0
3	120.0	50.0	27.0	0.0
4	125.0	800.0	0.0	0.0
5	120.0	800.0	0.0	0.0
6	105.0	400.0	0.0	0.0
7	115.0	0.0	27.0	0.0



* Number after hyphen('-') is Soil Type

```
COFE23A - boring 23,stability 1,end of construction
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   14.0   X increment =     1.0
First Y=   38.0   Y increment =     1.0
Minimum radius=   53.0   radius increment =    1.0


Circle center at X=  14.0, Y=  38.0
FS= 1.715 at R=  53.0
FS= 2.182 at R=  54.0
Minimum FS for center = 1.715 at R=  53.0

Circle center at X=  15.0, Y=  38.0
FS= 1.711 at R=  53.0
FS= 2.198 at R=  54.0
Minimum FS for center = 1.711 at R=  53.0

Circle center at X=  15.0, Y=  37.0
FS= 2.193 at R=  53.0
FS= 2.386 at R=  54.0
Minimum FS for center = 2.193 at R=  53.0

Circle center at X=  14.0, Y=  37.0
FS= 2.177 at R=  53.0
FS= 2.363 at R=  54.0
Minimum FS for center = 2.177 at R=  53.0

Circle center at X=  13.0, Y=  37.0
FS= 2.166 at R=  53.0
FS= 2.345 at R=  54.0
Minimum FS for center = 2.166 at R=  53.0

Circle center at X=  13.0, Y=  38.0
FS= 1.722 at R=  53.0
FS= 2.170 at R=  54.0
Minimum FS for center = 1.722 at R=  53.0

Circle center at X=  13.0, Y=  39.0
FS= 1.770 at R=  53.0
FS= 1.722 at R=  54.0
FS= 2.175 at R=  55.0
Minimum FS for center = 1.722 at R=  54.0

Circle center at X=  14.0, Y=  39.0
FS= 1.761 at R=  53.0
FS= 1.716 at R=  54.0
FS= 2.188 at R=  55.0
Minimum FS for center = 1.716 at R=  54.0

Circle center at X=  15.0, Y=  39.0
FS= 1.757 at R=  53.0
FS= 1.713 at R=  54.0
FS= 2.205 at R=  55.0
Minimum FS for center = 1.713 at R=  54.0

Circle center at X=  16.0, Y=  38.0
FS= 1.710 at R=  53.0
FS= 2.218 at R=  54.0
```

```
Circle center at X=  16.0, Y=  37.0
FS= 2.211 at R=  53.0
FS= 2.414 at R=  54.0
Minimum FS for center = 2.211 at R=  53.0

Circle center at X=  16.0, Y=  39.0
FS= 1.756 at R=  53.0
FS= 1.713 at R=  54.0
FS= 2.226 at R=  55.0
Minimum FS for center = 1.713 at R=  54.0

Circle center at X=  17.0, Y=  38.0
FS= 1.712 at R=  53.0
FS= 2.241 at R=  54.0
Minimum FS for center = 1.712 at R=  53.0

Circle center at X=  17.0, Y=  37.0
FS= 2.233 at R=  53.0
FS= 2.448 at R=  54.0
Minimum FS for center = 2.233 at R=  53.0

Circle center at X=  17.0, Y=  39.0
FS= 1.757 at R=  53.0
FS= 1.716 at R=  54.0
FS= 2.252 at R=  55.0
Minimum FS for center = 1.716 at R=  54.0

Minimum FS found during automatic search = 1.71
Found at X=  16.0, Y=  38.0, R=  53.0
```

```
                                SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A
Location: Station 63+00, near boring 23 with reference boring 24
Filename: COFE23A   Description: boring 23,stability 1,end of construction

ANALYSIS DATA
Line   Left      Left      Right     Right     Density   Cohesion  Phi    RU
No.    X         Y         X         Y         pcf       psf       Deg
  1    -30.0       2.0       0.0       2.0     130.0     1300       0     0.50
  2      0.0       2.0      16.0      10.0     130.0     1300       0     0.50
  3     16.0      10.0      38.0      21.0     130.0     1300       0     0.50
  4     38.0      21.0      56.0      21.0     130.0     1300       0     0.50
  5     56.0      21.0      78.0      10.0     130.0     1300       0     0.50
  6     16.0      10.0      78.0      10.0     130.0     1300       0     0.50
  7     78.0      10.0      84.0      10.0     120.0      600       7     0.00
  8     84.0      10.0     100.0      10.0     120.0      600       7     0.00
  9     78.0       7.0     100.0       7.0     120.0       50      27     0.00
 10     60.0      -2.0      78.0       7.0     120.0       50      27     0.00
 11    -30.0      -2.0      60.0      -2.0     125.0      800       0     0.00
 12     60.0      -2.0     100.0      -2.0     120.0      800       0     0.00
 13    -30.0      -7.0     100.0      -7.0     105.0      400       0     0.00
 14    -30.0     -15.0     100.0     -15.0     115.0        0      27     0.00

Depth of tension crack = 0

Distributed loads
No.  Left X  Right X  Load (lbf/ft)
 1     38.0    56.0    100.0
```

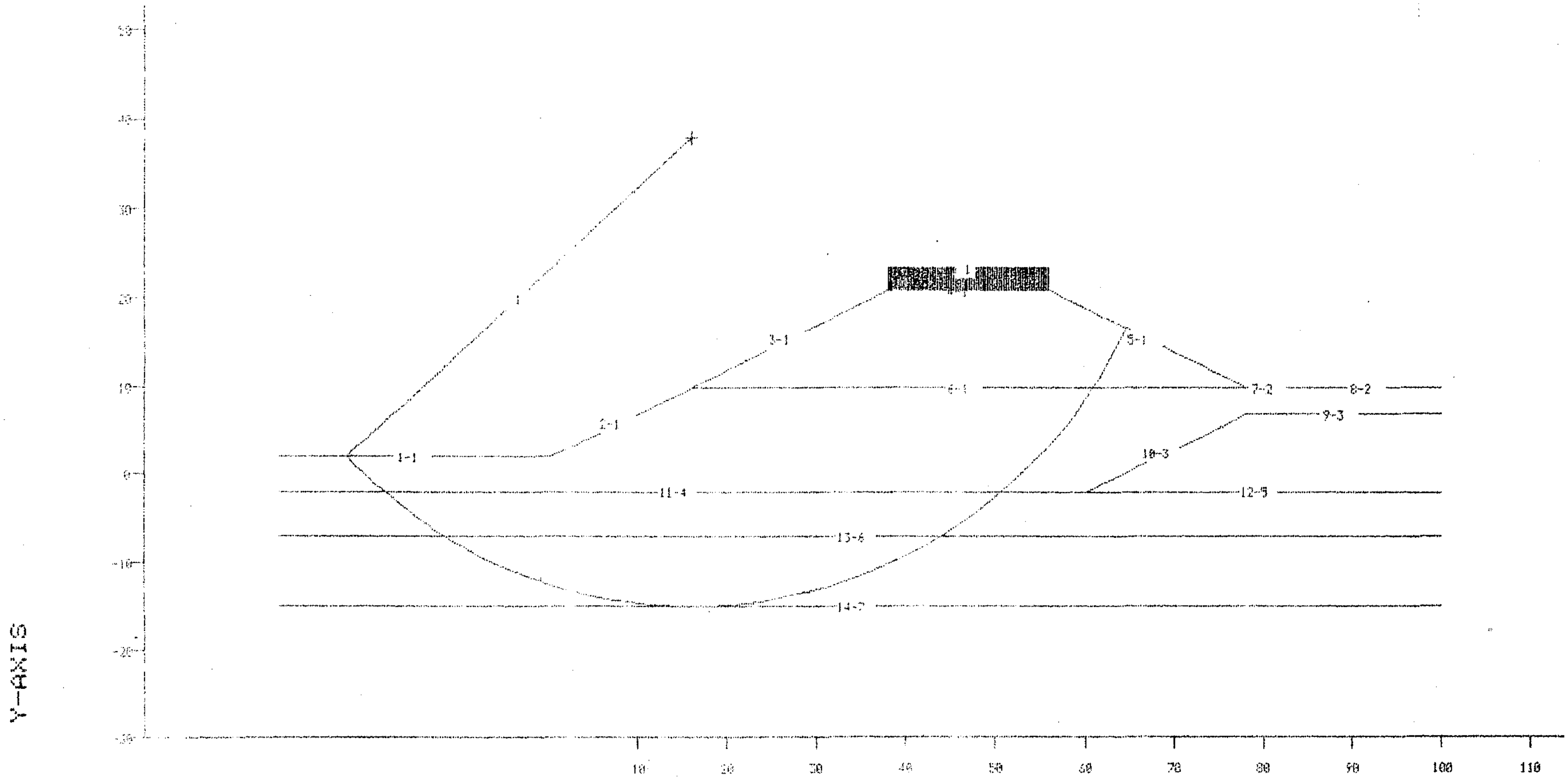
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A
LOCATION: Station 63+00, near boring 23 with reference boring 24
FILE: COFE23A
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	16.0	38.0	53.0	1.63

SOIL*	DENSITY	COHESION	PHI	RU
1	130.0	1300.0	0.0	0.5
2	120.0	600.0	7.0	0.0
3	120.0	50.0	27.0	0.0
4	120.0	600.0	0.0	0.0
5	120.0	800.0	0.0	0.0
6	105.0	400.0	0.0	0.0
7	115.0	0.0	27.0	0.0



* Number after hyphen('-') is Soil Type

FINAL / COFE 23A / CASE 1 - END OF CONST

```
COFE23A - boring 23,stability 1,end of construction
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   16.0   X increment =    1.0
First Y=   38.0   Y increment =    1.0
Minimum radius=   53.0   radius increment =    1.0


Minimum FS found during automatic search = 1.63
Found at X=  16.0, Y=  38.0, R=  53.0



                                       SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A
Location: Station 63+00, near boring 23 with reference boring 24
Filename: COFE23A   Description: boring 23,stability 1,end of construction

ANALYSIS DATA
Line    Left      Left      Right     Right      Density   Cohesion   Phi    Ru
No.     X         Y         X         Y          pcf       psf        Deg
  1      -30.0       2.0       0.0       2.0     130.0      1300       0     0.50
  2        0.0       2.0      16.0      10.0     130.0      1300       0     0.50
  3       16.0      10.0      38.0      21.0     130.0      1300       0     0.50
  4       38.0      21.0      56.0      21.0     130.0      1300       0     0.50
  5       56.0      21.0      78.0      10.0     130.0      1300       0     0.50
  6       16.0      10.0      78.0      10.0     130.0      1300       0     0.50
  7       78.0      10.0      84.0      10.0     120.0       600       7     0.00
  8       84.0      10.0     100.0      10.0     120.0       600       7     0.00
  9       78.0       7.0     100.0       7.0     120.0        50      27     0.00
 10       60.0      -2.0      78.0       7.0     120.0        50      27     0.00
 11      -30.0      -2.0      60.0      -2.0     120.0       600       0     0.00
 12       60.0      -2.0     100.0      -2.0     120.0       800       0     0.00
 13      -30.0      -7.0     100.0      -7.0     105.0       400       0     0.00
 14      -30.0     -15.0     100.0     -15.0     115.0         0      27     0.00

Depth of tension crack = 0

Distributed loads
No.   Left X   Right X   Load (lbf/ft)
 1     38.0     56.0     100.0
```

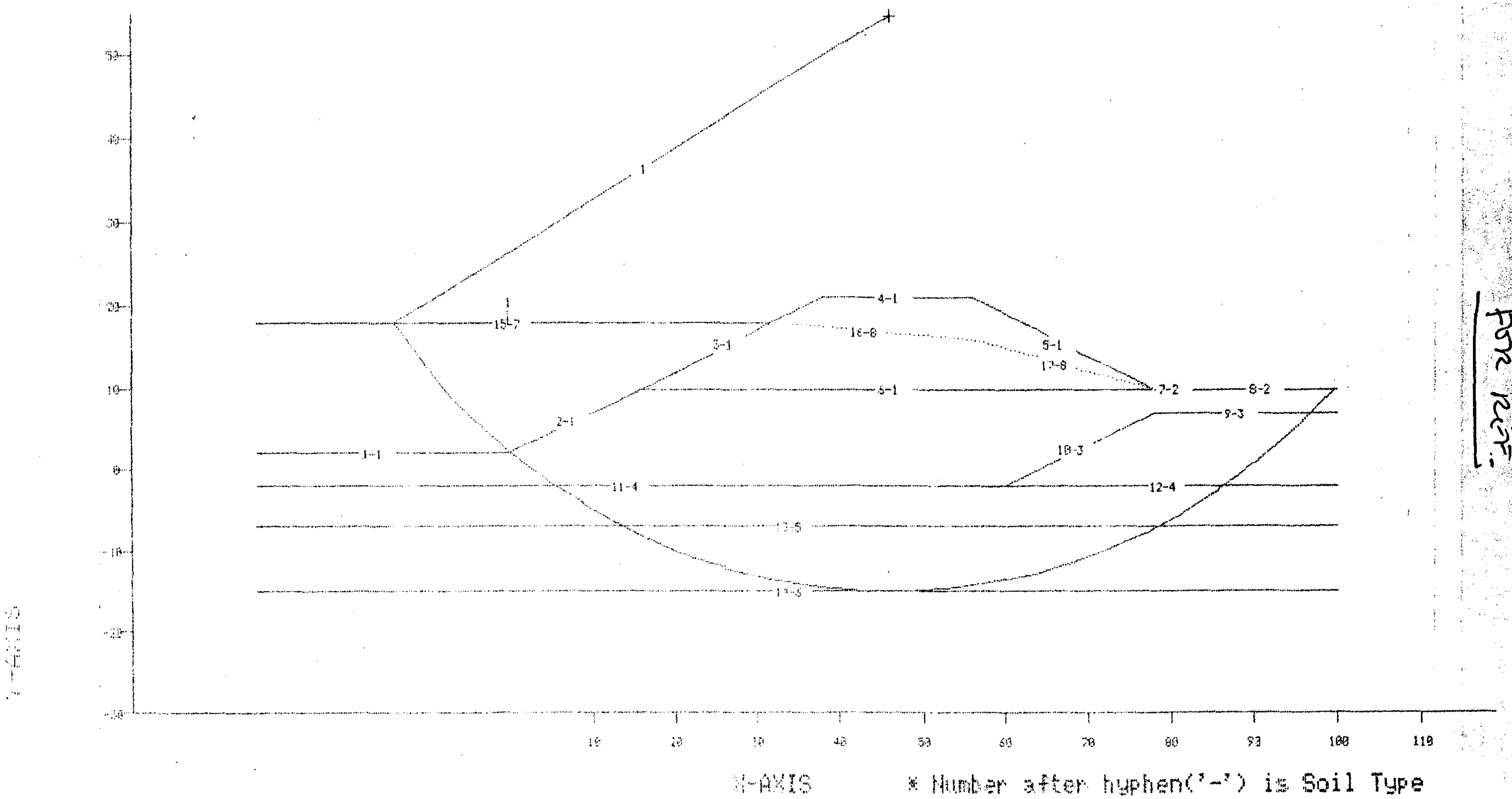
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A
LOCATION: Station 63+00, near boring 23 with reference boring 24
FILE: COFE23Q
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	46.0	55.0	70.0	1.08

SOIL*	DENSITY	COHESION	PHI
1	130.0	1300.0	0.0
2	120.0	600.0	7.0
3	120.0	50.0	27.0
4	120.0	700.0	0.0
5	105.0	600.0	0.0
6	115.0	0.0	30.0
7	62.4	0.0	0.0
8	130.0	1300.0	0.0



* Number after hyphen('-') is Soil Type

FOR REF.

```
PROJECT DATA
Project: COYOTE REACH 2A
Location: Station 63+00, near boring 23 with reference boring 24
Filename: COFE23Q   Description: critical flood, earthquake, case 6a

ANALYSIS DATA
Line   Left     Left     Right    Right    Density  Cohesion  Phi   Phreatic
No.    X        Y        X        Y        pcf      psf       Deg   Line
  1    -30.0      2.0      0.0      2.0    130.0     1300      0    N
  2      0.0      2.0     16.0     10.0    130.0     1300      0    N
  3     16.0     10.0     38.0     21.0    130.0     1300      0    N
  4     38.0     21.0     56.0     21.0    130.0     1300      0    N
  5     56.0     21.0     78.0     10.0    130.0     1300      0    N
  6     16.0     10.0     78.0     10.0    130.0     1300      0    N
  7     78.0     10.0     84.0     10.0    120.0      600      7    N
  8     84.0     10.0    100.0     10.0    120.0      600      7    N
  9     78.0      7.0    100.0      7.0    120.0       50     27    N
 10     60.0     -2.0     78.0      7.0    120.0       50     27    N
 11    -30.0     -2.0     60.0     -2.0    120.0      700      0    N
 12     60.0     -2.0    100.0     -2.0    120.0      700      0    N
 13    -30.0     -7.0    100.0     -7.0    105.0      600      0    N
 14    -30.0    -15.0    100.0    -15.0    115.0        0     30    N
 15    -30.0     18.0     32.0     18.0     62.4        0      0    N
 16     32.0     18.0     56.0     16.0    130.0     1300      0    Y
 17     56.0     16.0     78.0     10.0    130.0     1300      0    Y

Horizontal earthquake coefficient = 0.3
Vertical earthquake coefficient = 0.1

Distributed loads
No.  Left X  Right X  Load (lbf/ft)
 1     0.0     0.0       0.0
```

```
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=    46.0    X increment =     1.0
First Y=    55.0    Y increment =     1.0
Minimum radius=    70.0    radius increment =     1.0


Circle center at X=  46.0, Y=  55.0
FS= 1.080 at R=  70.0
Radius too large at R=  71.0
Minimum FS for center = 1.080 at R=  70.0

Circle center at X=  47.0, Y=  55.0
Radius too large at R=  70.0
No valid circles at this center

Circle center at X=  47.0, Y=  54.0
Radius too large at R=  70.0
No valid circles at this center

Circle center at X=  46.0, Y=  54.0
Radius too large at R=  70.0
No valid circles at this center

Circle center at X=  45.0, Y=  54.0
FS= 1.255 at R=  70.0
Radius too large at R=  71.0
Minimum FS for center = 1.255 at R=  70.0

Circle center at X=  45.0, Y=  55.0
FS= 1.091 at R=  70.0
FS= 1.249 at R=  71.0
Minimum FS for center = 1.091 at R=  70.0

Circle center at X=  45.0, Y=  56.0
FS= 1.100 at R=  70.0
FS= 1.086 at R=  71.0
Radius too large at R=  72.0
Minimum FS for center = 1.086 at R=  71.0

Circle center at X=  46.0, Y=  56.0
FS= 1.095"COFE23Q",-1,0,-30,100,-15,21
1,1
46,55,1.07979637117
45,54,1.25511303273
45,55,1.09067559763
45,56,1.08587024579
46,56,1. at R=  70.0
Radius too large at R=  71.0
Minimum FS for center = 1.095 at R=  70.0

Circle center at X=  47.0, Y=  56.0
FS= 1.091 at R=  70.0
Radius too large at R=  71.0
Minimum FS for center = 1.091 at R=  70.0

Minimum FS found during automati09467895825
47,56,1.09050687001
c search = 1.08
Found at X=  46.0, Y=  55.0, R=  70.0
```

```
                                   SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A
Location: Station 63+00, near boring 23 with reference boring 24
Filename: COFE23Q   Description: critical flood, earthquake, case 6a

ANALYSIS DATA
Line    Left      Left      Right     Right     Density   Cohesion  Phi   Phreatic
No.     X         Y         X         Y         pcf       psf       Deg   Line
  1      -30.0       2.0       0.0       2.0    130.0      1300      0    N
  2        0.0       2.0      16.0      10.0    130.0      1300      0    N
  3       16.0      10.0      38.0      21.0    130.0      1300      0    N
  4       38.0      21.0      56.0      21.0    130.0      1300      0    N
  5       56.0      21.0      78.0      10.0    130.0      1300      0    N
  6       16.0      10.0      78.0      10.0    130.0      1300      0    N
  7       78.0      10.0      84.0      10.0    120.0       600      7    N
  8       84.0      10.0     100.0      10.0    120.0       600      7    N
  9       78.0       7.0     100.0       7.0    120.0        50     27    N
 10       60.0      -2.0      78.0       7.0    120.0        50     27    N
 11      -30.0      -2.0      60.0      -2.0    120.0       600      0    N
 12       60.0      -2.0     100.0      -2.0    120.0       600      0    N
 13      -30.0      -7.0     100.0      -7.0    105.0       400      0    N
 14      -30.0     -15.0     100.0     -15.0    115.0         0     27    N
 15      -30.0      18.0      32.0      18.0     62.4         0      0    N
 16       32.0      18.0      56.0      16.0    130.0      1300      0    Y
 17       56.0      16.0      78.0      10.0    130.0      1300      0    Y

Horizontal earthquake coefficient = 0.25
Vertical earthquake coefficient = 0.1

Distributed Loads
No.   Left X  Right X  Load (lbf/ft)
 1     38.0    56.0     100.0
```

BORING 19

EMBANKMENT AND FOUNDATION STABILITY

1. Describe the basis for selection of critical location for analysis:

☐ Overall height: Sta 18+00 - 23+00 TO FEMA STA 555+00, height 19 ft.

☐ Limiting foundation soil strength:

Sta ______, depth ______ to ______

strength Ø = 30° 0 degrees, c = 1200 ± 50 psf - SEE COMPUTER OUTPUT

☐ slope: SS = 2 (h) to 1 (v)

(Repeat as needed on an added sheet for additional locations)

2. Specify the embankment stability analyses methodology used (e.g. circular arc, sliding block, infinite slope, etc.): CIRCULAR ARC - SIMPLIFIED BISHOP
S.B. SLOPE PROGRAM

3. Summary of stability analysis results:

Case	Loading Conditions	Critical Safety Factor	Criteria (Min.)
I	End of construction	2.59	1.3
II	Sudden drawdown	2.91	1.0
III	Critical flood stage	3.43	1.4
IV	Steady seepage at flood stage	3.52	1.4
VI	Earthquake (Case I or III)	2.36	1.0

(Reference: U.S. Army Corps of Engineers EM-1110-2-1913 Table 6-1)

4. Was a seepage analysis for the embankment performed? ☐ Yes ☒ No *

Describe methodology used:

* BY INSPECTION ALL FILL WITH IMPERVIOUS CLAY

5. Was a seepage analysis for the foundation performed? ☐ Yes ☑ No

Were uplift pressures at the embankment landside toe checked? ☐ Yes ☒ No

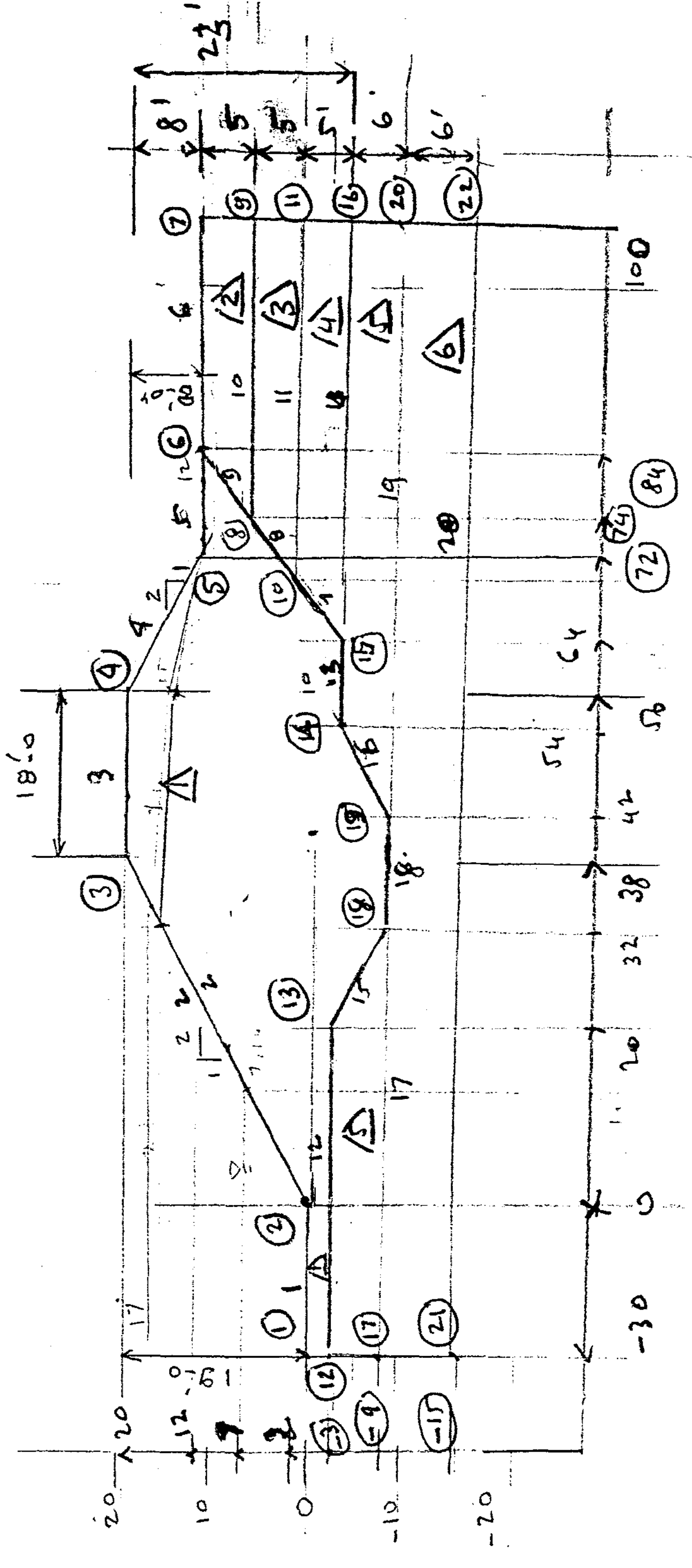
Were seepage exit gradients checked for piping potential? ☐ Yes ☒ No

6. The duration of 100-year flood hydrograph against the embankment is < 24 Hrs.

Note: Attach engineering analysis to support construction plans.

Santa Clara Valley Water District
5750 Almaden Expressway, San Jose 95118, Phone 265-2600

Page ______ of ______
Charge No. ______
By TRI - NGUYEN
Date 5-18-95
Subject COYOTE - /FEMA - LOMR - 19
Checked by ______ Date ______



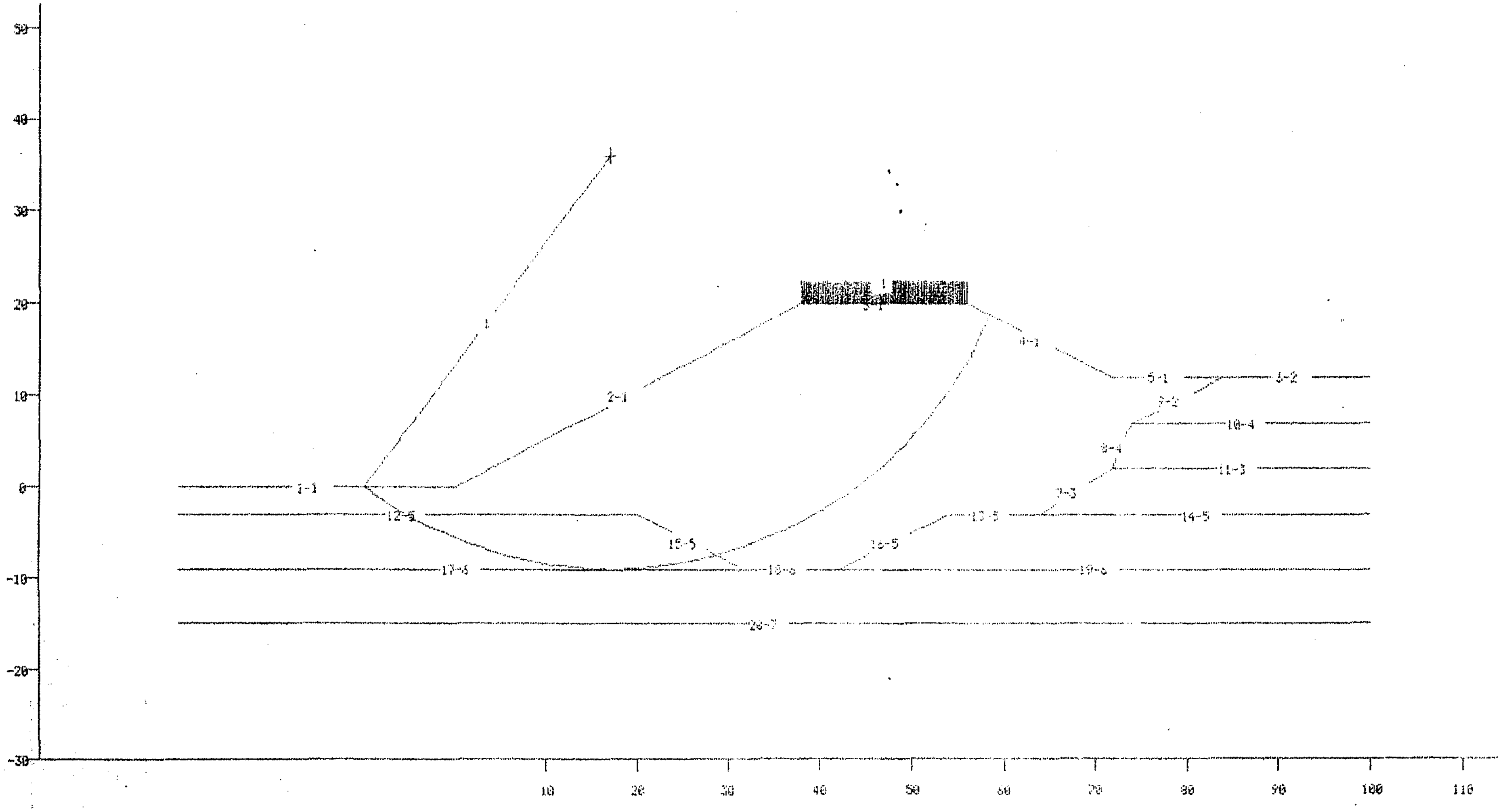
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A, Boring 19 and boring 21
LOCATION: As-Built Station 18+00 to 23+00
FILE: COFE19A
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	17.0	36.0	45.0	2.59

SOIL*	DENSITY	COHESION	PHI	RU
1	130.0	1200.0	0.0	0.5
2	130.0	1000.0	0.0	0.0
3	120.0	600.0	0.0	0.0
4	125.0	800.0	0.0	0.0
5	120.0	800.0	7.0	0.0
6	125.0	1200.0	0.0	0.0
7	130.0	50.0	30.0	0.0



* Number after hyphen('-') is Soil Type

COFE19A-1

FINAL

```
COFE19A - end of construction, stability case 1
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   17.0   X increment =    1.0
First Y=   36.0   Y increment =    1.0
Minimum radius=   45.0   radius increment =    1.0


Minimum FS found during automatic search = 2.59
Found at X=  17.0, Y=  36.0, R=  45.0


                                SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A, Boring 19 and boring 21
Location: As-Built Station 18+00 to 23+00
Filename: COFE19A   Description: end of construction, stability case 1

ANALYSIS DATA
Line   Left     Left     Right    Right    Density  Cohesion  Phi   Ru
No.    X        Y        X        Y        pcf      psf       Deg
  1    -30.0      0.0      0.0      0.0    130.0    1200      0    0.50
  2      0.0      0.0     38.0     20.0    130.0    1200      0    0.50
  3     38.0     20.0     56.0     20.0    130.0    1200      0    0.50
  4     56.0     20.0     72.0     12.0    130.0    1200      0    0.50
  5     72.0     12.0     84.0     12.0    130.0    1200      0    0.50
  6     84.0     12.0    100.0     12.0    130.0    1000      0    0.00
  7     64.0     -3.0     72.0      2.0    120.0     600      0    0.00
  8     72.0      2.0     74.0      7.0    125.0     800      0    0.00
  9     74.0      7.0     84.0     12.0    130.0    1000      0    0.00
 10     74.0      7.0    100.0      7.0    125.0     800      0    0.00
 11     72.0      2.0    100.0      2.0    120.0     600      0    0.00
 12    -30.0     -3.0     20.0     -3.0    120.0     800      7    0.00
 13     54.0     -3.0     64.0     -3.0    120.0     800      7    0.00
 14     64.0     -3.0    100.0     -3.0    120.0     800      7    0.00
 15     20.0     -3.0     32.0     -9.0    120.0     800      7    0.00
 16     42.0     -9.0     54.0     -3.0    120.0     800      7    0.00
 17    -30.0     -9.0     32.0     -9.0    125.0    1200      0    0.00
 18     32.0     -9.0     42.0     -9.0    125.0    1200      0    0.00
 19     42.0     -9.0    100.0     -9.0    125.0    1200      0    0.00
 20    -30.0    -15.0    100.0    -15.0    130.0      50     30    0.00

Distributed loads
No.   Left X  Right X  Load (lbf/ft)
 1     38.0    56.0    100.0
```

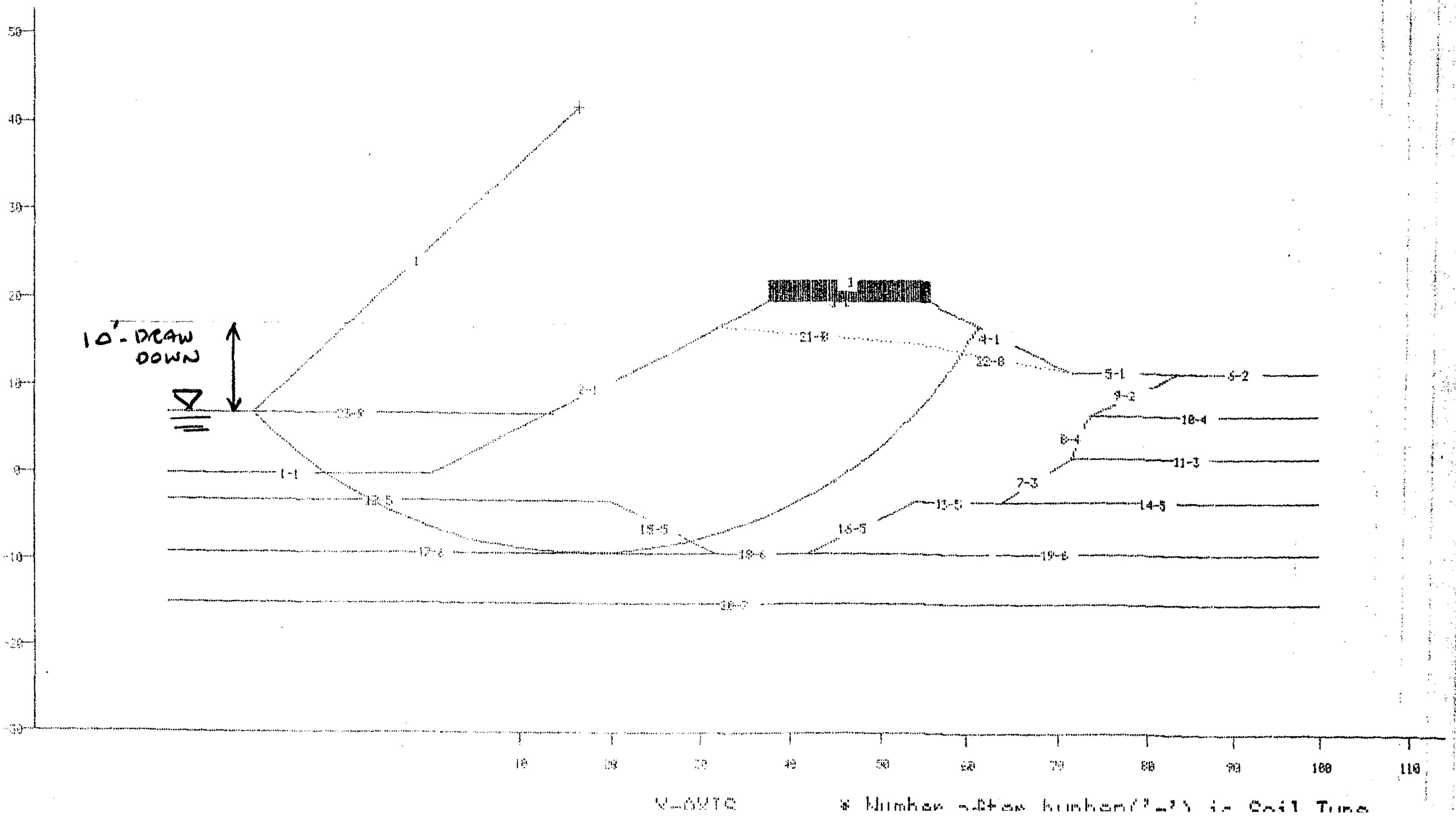
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A, Boring 19 and boring 21
LOCATION: As-Built Station 18+00 to 23+00
FILE: COFE19D
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	17.0	42.0	51.0	2.91

SOIL*	DENSITY	COHESION	PHI
1	130.0	1200.0	0.0
2	130.0	1000.0	0.0
3	120.0	600.0	0.0
4	125.0	800.0	0.0
5	120.0	800.0	7.0
6	125.0	1200.0	0.0
7	130.0	50.0	30.0
8	130.0	1200.0	0.0
9	62.4	0.0	0.0



* Number after hyphen('-') is Soil Type

FINAL - COFE19-D-/2 - 10' DRAWDO

```
                                        SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A, Boring 19 and boring 21
 ocation: As-Built Station 18+00 to 23+00
 ilename: COFE19D   Description: flood sudden drawdown, case 2 steady seepage

ANALYSIS DATA
Line    Left       Left       Right      Right      Density   Cohesion   Phi    Phreatic
No.     X          Y          X          Y          pcf       psf        Deg    Line
  1      -30.0       0.0        0.0        0.0      130.0      1200       0     N
  2        0.0       0.0       38.0       20.0      130.0      1200       0     N
  3       38.0      20.0       56.0       20.0      130.0      1200       0     N
  4       56.0      20.0       72.0       12.0      130.0      1200       0     N
  5       72.0      12.0       84.0       12.0      130.0      1200       0     N
  6       84.0      12.0      100.0       12.0      130.0      1000       0     N
  7       64.0      -3.0       72.0        2.0      120.0       600       0     N
  8       72.0       2.0       74.0        7.0      125.0       800       0     N
  9       74.0       7.0       84.0       12.0      130.0      1000       0     N
 10       74.0       7.0      100.0        7.0      125.0       800       0     N
 11       72.0       2.0      100.0        2.0      120.0       600       0     N
 12      -30.0      -3.0       20.0       -3.0      120.0       800       7     N
 13       54.0      -3.0       64.0       -3.0      120.0       800       7     N
 14       64.0      -3.0      100.0       -3.0      120.0       800       7     N
 15       20.0      -3.0       32.0       -9.0      120.0       800       7     N
 16       42.0      -9.0       54.0       -3.0      120.0       800       7     N
 17      -30.0      -9.0       32.0       -9.0      125.0      1200       0     N
 18       32.0      -9.0       42.0       -9.0      125.0      1200       0     N
 19       42.0      -9.0      100.0       -9.0      125.0      1200       0     N
 20      -30.0     -15.0      100.0      -15.0      130.0        50      30     N
 21       32.0      17.0       56.0       15.0      130.0      1200       0     Y
 22       56.0      15.0       72.0       12.0      130.0      1200       0     Y
 23      -30.0       7.0       14.0        7.0       62.4         0       0     N

Depth of tension crack = 2

Distributed loads
No.   Left X  Right X  Load (lbf/ft)
 1     38.0     56.0     100.0
```

SB-SLOPE

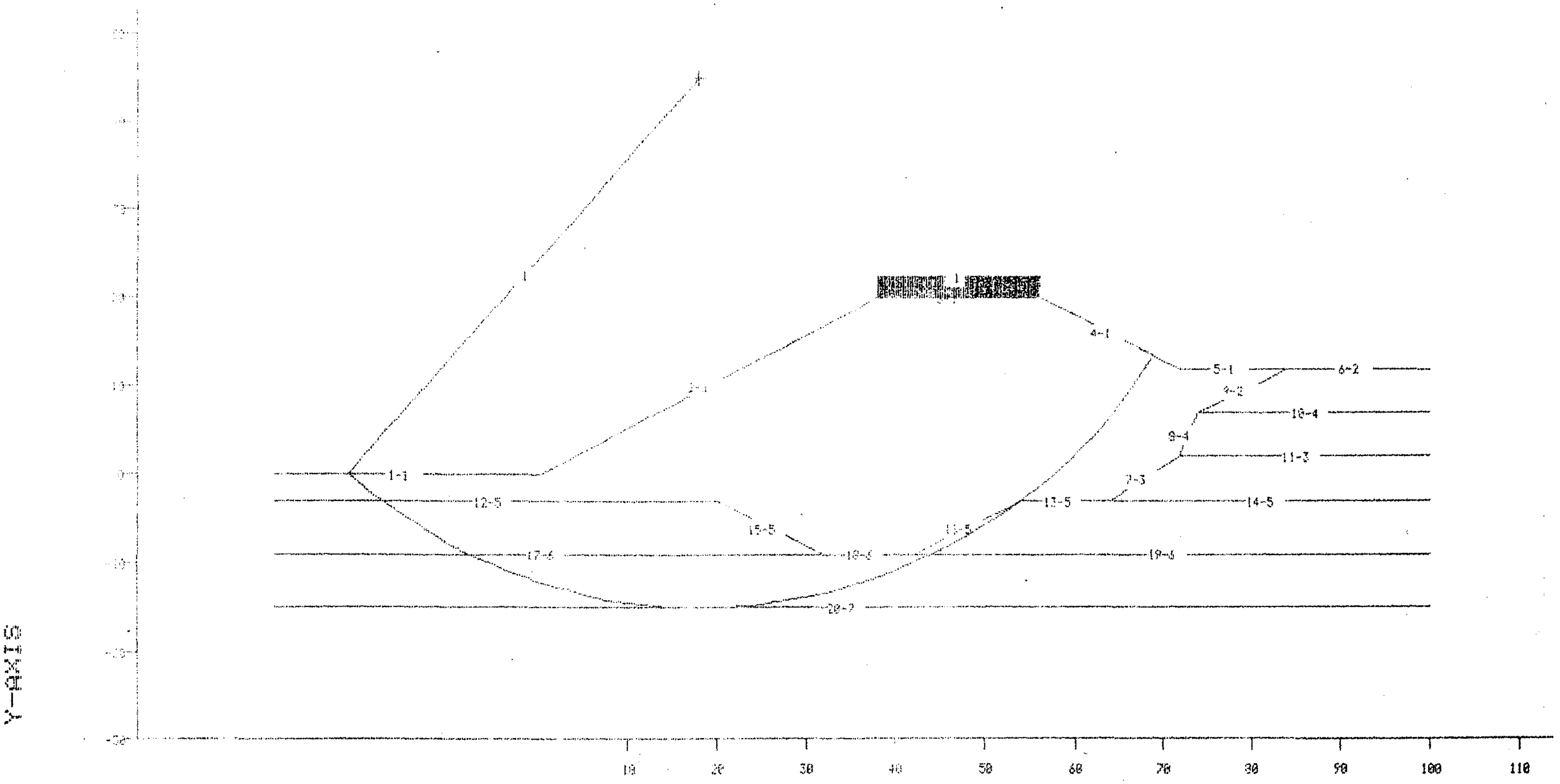
Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A, Boring 19 and boring 21
LOCATION: As-Built Station 18+00 to 23+00
FILE: COFE19E

COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	18.0	45.0	60.0	1.67

SOIL*	DENSITY	COHESION	PHI	RU
1	130.0	1200.0	0.0	0.5
2	130.0	1000.0	0.0	0.0
3	120.0	600.0	0.0	0.0
4	125.0	800.0	0.0	0.0
5	120.0	800.0	7.0	0.0
6	125.0	1200.0	0.0	0.0
7	130.0	50.0	30.0	0.0



X-AXIS * Number after hyphen('-') is Soil Type

COFE 19 E / Case 6 (Case 1 + seismic)

FINAL

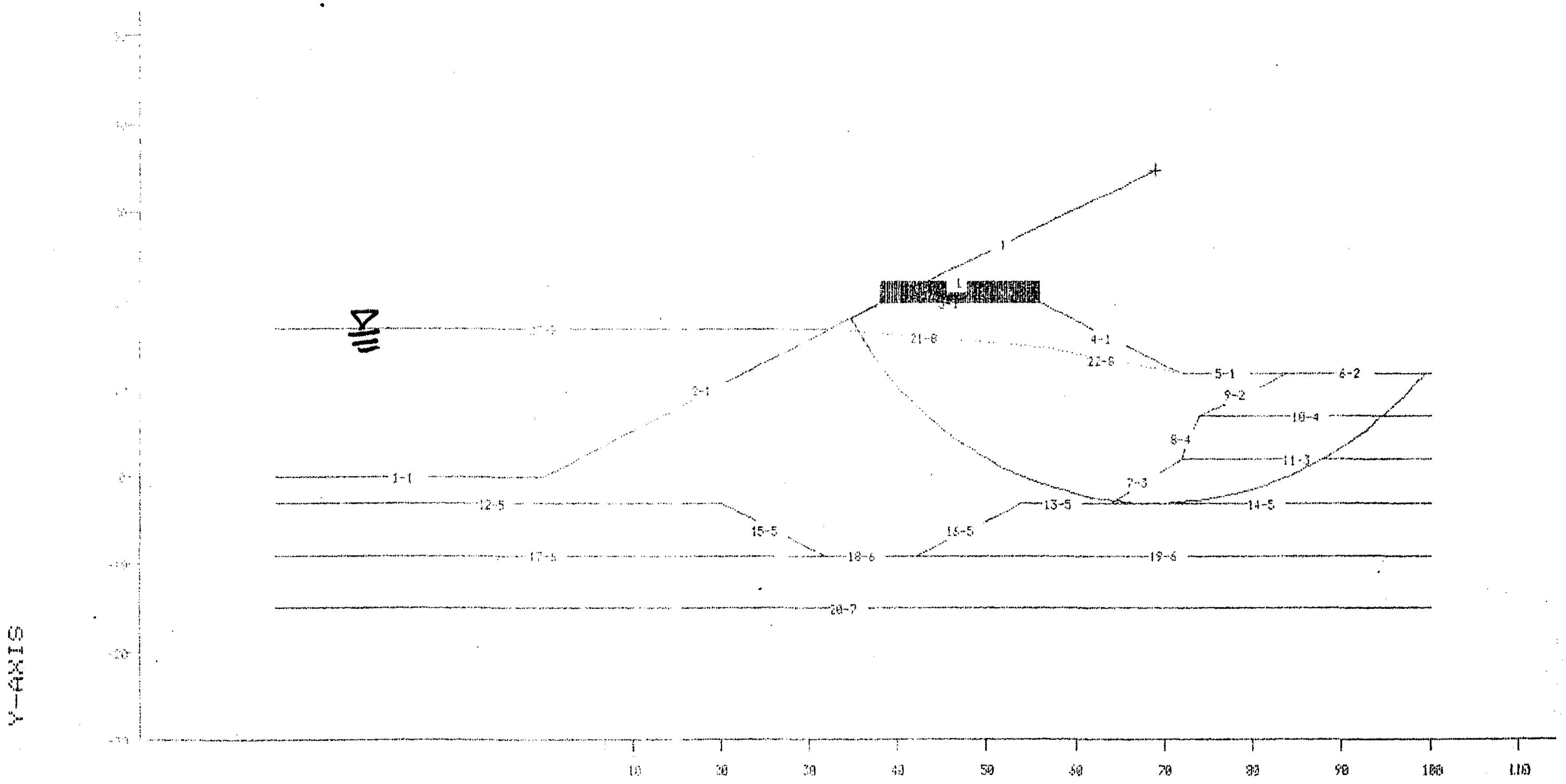
```
COFE19E - earthquake at end of construction,case 6
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=    19.0   X increment =     1.0
First Y=    47.0   Y increment =     1.0
Minimum radius=   56.0   radius increment =    1.0


Minimum FS found during automatic search = 1.67
Found at X=  18.0, Y=  45.0, R=  60.0



                                  SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A, Boring 19 and boring 21
Location: As-Built Station 18+00 to 23+00
Filename: COFE19E   Description: earthquake at end of construction,case 6

ANALYSIS DATA
Line    Left      Left      Right     Right     Density   Cohesion  Phi    Ru
No.     X         Y         X         Y         pcf       psf       Deg
  1      -30.0       0.0       0.0       0.0    130.0      1200      0     0.50
  2        0.0       0.0      38.0      20.0    130.0      1200      0     0.50
  3       38.0      20.0      56.0      20.0    130.0      1200      0     0.50
  4       56.0      20.0      72.0      12.0    130.0      1200      0     0.50
  5       72.0      12.0      84.0      12.0    130.0      1200      0     0.50
  6       84.0      12.0     100.0      12.0    130.0      1000      0     0.00
  7       64.0      -3.0      72.0       2.0    120.0       600      0     0.00
  8       72.0       2.0      74.0       7.0    125.0       800      0     0.00
  9       74.0       7.0      84.0      12.0    130.0      1000      0     0.00
 10       74.0       7.0     100.0       7.0    125.0       800      0     0.00
 11       72.0       2.0     100.0       2.0    120.0       600      0     0.00
 12      -30.0      -3.0      20.0      -3.0    120.0       800      7     0.00
 13       54.0      -3.0      64.0      -3.0    120.0       800      7     0.00
 14       64.0      -3.0     100.0      -3.0    120.0       800      7     0.00
 15       20.0      -3.0      32.0      -9.0    120.0       800      7     0.00
 16       42.0      -9.0      54.0      -3.0    120.0       800      7     0.00
 17      -30.0      -9.0      32.0      -9.0    125.0      1200      0     0.00
 18       32.0      -9.0      42.0      -9.0    125.0      1200      0     0.00
 19       42.0      -9.0     100.0      -9.0    125.0      1200      0     0.00
 20      -30.0     -15.0     100.0     -15.0    130.0        50     30     0.00

Horizontal earthquake coefficient = 0.2
Vertical earthquake coefficient = 0.05

Distributed loads
No.  Left X  Right X  Load (lbf/ft)
 1     38.0    56.0    100.0
```

SB-SLOPE
Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A, Boring 19 and boring 21
LOCATION: As-Built Station 18+00 to 23+00
FILE: COFE19F
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	69.0	35.0	38.0	4.71

SOIL*	DENSITY	COHESION	PHI
1	130.0	1200.0	0.0
2	130.0	1000.0	0.0
3	120.0	600.0	0.0
4	125.0	800.0	0.0
5	120.0	800.0	7.0
6	125.0	1200.0	0.0
7	130.0	50.0	30.0
8	130.0	1200.0	0.0
9	62.4	0.0	0.0



X-AXIS * Number after hyphen('-') is Soil Type

FINAL. COFE 19F / FLOOD STATION SEEPAGE
case 3.

```
COFE19F - critical flood,case 3, steady seepage
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=    15.0    X increment =     1.0
First Y=    41.0    Y increment =     1.0
Minimum radius=   51.0    radius increment =    1.0

Circle center at X=  15.0, Y=  41.0
FS= 3.426 at R=  51.0
Radius too large at R=  52.0
Minimum FS for center = 3.426 at R=  51.0

Circle center at X=  16.0, Y=  41.0
Tension crack too deep for circle at R=  51.0
Radius too large at R=  52.0
No valid circles at this center

Circle center at X=  16.0, Y=  40.0
Tension crack too deep for circle at R=  51.0
Radius too large at R=  52.0
No valid circles at this center

Circle center at X=  15.0, Y=  40.0
Radius too large at R=  51.0
No valid circles at this center

Circle center at X=  14.0, Y=  40.0
Radius too large at R=  51.0
No valid circles at this center

Circle center at X=  14.0, Y=  41.0
Radius too large at R=  51.0
No valid circles at this center

Circle center at X=  14.0, Y=  42.0
Radius too large at R=  51.0
No valid circles at this center

Circle center at X=  15.0, Y=  42.0
Tension crack too deep for circle at R=  51.0
Radius too large at R=  52.0
No valid circles at this center

Circle center at X=  16.0, Y=  42.0
Tension crack too deep for circle at R=  51.0
Tension crack too deep for circle at R=  52.0
Radius too large at R=  53.0
No valid circles at this center

Minimum FS found during automatic search = 3.43
Found at X=  15.0, Y=  41.0, R=  51.0
```

```
COFE19F - critical flood,case 3, steady seepage
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=    69.0    X increment =     1.0
First Y=    35.0    Y increment =     1.0
Minimum radius=   38.0    radius increment =     1.0

Circle center at X=  69.0, Y=  35.0
FS= 4.714 at R=  38.0
Radius too large at R=  39.0
Minimum FS for center = 4.714 at R=  38.0

Circle center at X=  70.0, Y=  35.0
Radius too large at R=  38.0
No valid circles at this center

Circle center at X=  70.0, Y=  34.0
Radius too large at R=  38.0
No valid circles at this center

Circle center at X=  69.0, Y=  34.0
FS= 4.948 at R=  38.0
Radius too large at R=  39.0
Minimum FS for center = 4.948 at R=  38.0

Circle center at X=  68.0, Y=  34.0
FS= 4.960 at R=  38.0
Radius too large at R=  39.0
Minimum FS for center = 4.960 at R=  38.0

Circle center at X=  68.0, Y=  35.0
FS= 4.754 at R=  38.0
FS= 5.007 at R=  39.0
Minimum FS for center = 4.754 at R=  38.0

Circle center at X=  68.0, Y=  36.0
FS= 4.856 at R=  38.0
FS= 4.797 at R=  39.0
FS= 5.059 at R=  40.0
Minimum FS for center = 4.797 at R=  39.0

Circle center at X=  69.0, Y=  36.0
FS= 4.822 at R=  38.0
FS= 4.748 at R=  39.0
Radius too large at R=  40.0
Minimum FS for center = 4.748 at R=  39.0

Circle center at X=  70.0, Y=  36.0
FS= 4.817 at R=  38.0
Radius too large at R=  39.0
Minimum FS for center = 4.817 at R=  38.0

Minimum FS found during automatic search = 4.71
Found at X=  69.0, Y=  35.0, R=  38.0


                                SB-SLOPE

PROJECT DATA
```

```
Filename: COFE19F   Description: critical flood,case 3, steady seepage

ANALYSIS DATA
Line    Left      Left      Right     Right     Density   Cohesion  Phi   Phreat:
No.     X         Y         X         Y         pcf       psf       Deg   Line
  1      -30.0       0.0       0.0       0.0     130.0      1200      0    N
  2        0.0       0.0      38.0      20.0     130.0      1200      0    N
  3       38.0      20.0      56.0      20.0     130.0      1200      0    N
  4       56.0      20.0      72.0      12.0     130.0      1200      0    N
  5       72.0      12.0      84.0      12.0     130.0      1200      0    N
  6       84.0      12.0     100.0      12.0     130.0      1000      0    N
  7       64.0      -3.0      72.0       2.0     120.0       600      0    N
  8       72.0       2.0      74.0       7.0     125.0       800      0    N
  9       74.0       7.0      84.0      12.0     130.0      1000      0    N
 10       74.0       7.0     100.0       7.0     125.0       800      0    N
 11       72.0       2.0     100.0       2.0     120.0       600      0    N
 12      -30.0      -3.0      20.0      -3.0     120.0       800      7    N
 13       54.0      -3.0      64.0      -3.0     120.0       800      7    N
 14       64.0      -3.0     100.0      -3.0     120.0       800      7    N
 15       20.0      -3.0      32.0      -9.0     120.0       800      7    N
 16       42.0      -9.0      54.0      -3.0     120.0       800      7    N
 17      -30.0      -9.0      32.0      -9.0     125.0      1200      0    N
 18       32.0      -9.0      42.0      -9.0     125.0      1200      0    N
 19       42.0      -9.0     100.0      -9.0     125.0      1200      0    N
 20      -30.0     -15.0     100.0     -15.0     130.0        50     30    N
 21       32.0      17.0      56.0      15.0     130.0      1200      0    Y
 22       56.0      15.0      72.0      12.0     130.0      1200      0    Y
 23      -30.0      17.0      32.0      17.0      62.4         0      0    N

Depth of tension crack = 2

Distributed loads
No.  Left X  Right X  Load (lbf/ft)
 1     38.0    56.0    100.0
```

```
          COFE19F - critical flood,case 3, steady seepage
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   69.0   X increment =    1.0
First Y=   35.0   Y increment =    1.0
Minimum radius=   38.0   radius increment =   1.0


Minimum FS found during automatic search = 4.71
Found at X=  69.0, Y=  35.0, R=  38.0




                              SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A, Boring 19 and boring 21
Location: As-Built Station 18+00 to 23+00
Filename: COFE19F   Description: critical flood,case 3, steady seepage

ANALYSIS DATA
Line    Left      Left      Right     Right     Density   Cohesion  Phi   Phreat
No.     X         Y         X         Y         pcf       psf       Deg   Line
  1      -30.0       0.0       0.0       0.0    130.0      1200      0     N
  2        0.0       0.0      38.0      20.0    130.0      1200      0     N
  3       38.0      20.0      56.0      20.0    130.0      1200      0     N
  4       56.0      20.0      72.0      12.0    130.0      1200      0     N
  5       72.0      12.0      84.0      12.0    130.0      1200      0     N
  6       84.0      12.0     100.0      12.0    130.0      1000      0     N
  7       64.0      -3.0      72.0       2.0    120.0       600      0     N
  8       72.0       2.0      74.0       7.0    125.0       800      0     N
  9       74.0       7.0      84.0      12.0    130.0      1000      0     N
 10       74.0       7.0     100.0       7.0    125.0       800      0     N
 11       72.0       2.0     100.0       2.0    120.0       600      0     N
 12      -30.0      -3.0      20.0      -3.0    120.0       800      7     N
 13       54.0      -3.0      64.0      -3.0    120.0       800      7     N
 14       64.0      -3.0     100.0      -3.0    120.0       800      7     N
 15       20.0      -3.0      32.0      -9.0    120.0       800      7     N
 16       42.0      -9.0      54.0      -3.0    120.0       800      7     N
 17      -30.0      -9.0      32.0      -9.0    125.0      1200      0     N
 18       32.0      -9.0      42.0      -9.0    125.0      1200      0     N
 19       42.0      -9.0     100.0      -9.0    125.0      1200      0     N
 20      -30.0     -15.0     100.0     -15.0    130.0        50     30     N
 21       32.0      17.0      56.0      15.0    130.0      1200      0     Y
 22       56.0      15.0      72.0      12.0    130.0      1200      0     Y
 23      -30.0      17.0      32.0      17.0     62.4         0      0     N

Depth of tension crack = 2

Distributed loads
No.   Left X   Right X   Load (lbf/ft)
 1     38.0     56.0     100.0
```

```
COFE19F - critical flood,case 3, steady seepage
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   15.0   X increment =    1.0
First Y=   41.0   Y increment =    1.0
Minimum radius=   51.0   radius increment =    1.0

Minimum FS found during automatic search = 3.43
Found at X=  15.0, Y=  41.0, R=  51.0
```

```
COFE19F - critical flood,case 3, steady seepage
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   15.0   X increment =     1.0
First Y=   41.0   Y increment =     1.0
Minimum radius=   51.0   radius increment =    1.0


Minimum FS found during automatic search = 3.43
Found at X=  15.0, Y=  41.0, R=  51.0



                                 SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A, Boring 19 and boring 21
Location: As-Built Station 18+00 to 23+00
Filename: COFE19F   Description: critical flood,case 3, steady seepage

ANALYSIS DATA
Line    Left       Left       Right      Right      Density    Cohesion   Phi     Phreat
No.     X          Y          X          Y          pcf        psf        Deg     Line
  1      -30.0       0.0        0.0        0.0      130.0       1200       0      N
  2        0.0       0.0       38.0       20.0      130.0       1200       0      N
  3       38.0      20.0       56.0       20.0      130.0       1200       0      N
  4       56.0      20.0       72.0       12.0      130.0       1200       0      N
  5       72.0      12.0       84.0       12.0      130.0       1200       0      N
  6       84.0      12.0      100.0       12.0      130.0       1000       0      N
  7       64.0      -3.0       72.0        2.0      120.0        600       0      N
  8       72.0       2.0       74.0        7.0      125.0        800       0      N
  9       74.0       7.0       84.0       12.0      130.0       1000       0      N
 10       74.0       7.0      100.0        7.0      125.0        800       0      N
 11       72.0       2.0      100.0        2.0      120.0        600       0      N
 12      -30.0      -3.0       20.0       -3.0      120.0        800       7      N
 13       54.0      -3.0       64.0       -3.0      120.0        800       7      N
 14       64.0      -3.0      100.0       -3.0      120.0        800       7      N
 15       20.0      -3.0       32.0       -9.0      120.0        800       7      N
 16       42.0      -9.0       54.0       -3.0      120.0        800       7      N
 17      -30.0      -9.0       32.0       -9.0      125.0       1200       0      N
 18       32.0      -9.0       42.0       -9.0      125.0       1200       0      N
 19       42.0      -9.0      100.0       -9.0      125.0       1200       0      N
 20      -30.0     -15.0      100.0      -15.0      130.0         50      30      N
 21       32.0      17.0       56.0       15.0      130.0       1200       0      Y
 22       56.0      15.0       72.0       12.0      130.0       1200       0      Y
 23      -30.0      17.0       32.0       17.0       62.4          0       0      N

Depth of tension crack = 2

Distributed loads
No.  Left X  Right X  Load (lbf/ft)
 1     38.0    56.0    100.0
```

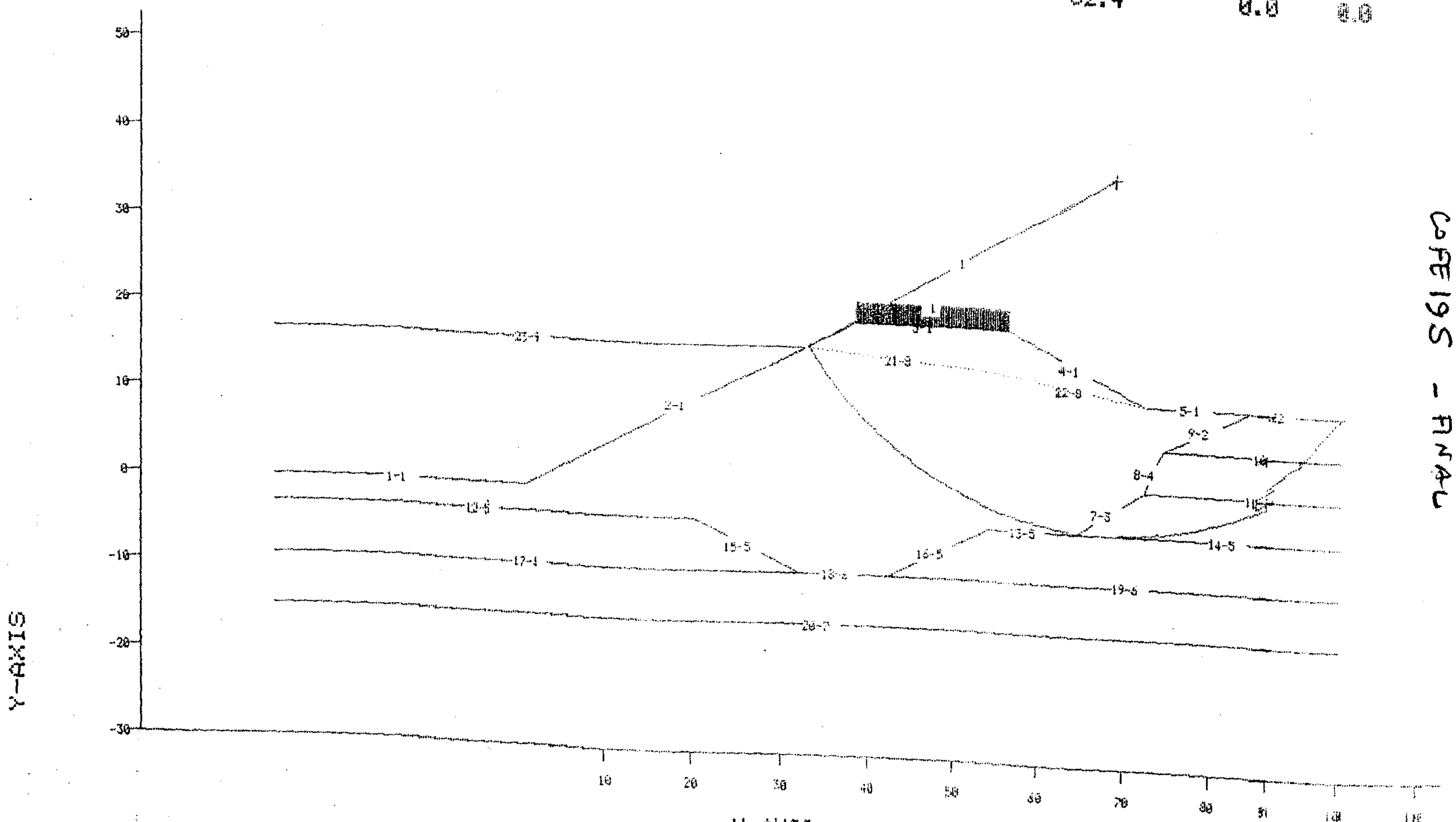
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A, Boring 19 and boring 21
LOCATION: As-Built Station 18+00 to 23+00
FILE: COFE19S
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	68.0	38.0	41.0	2.36

SOIL*	DENSITY	COHES	PHI
1	130.0	1200	0.0
2	130.0	1000	0.0
3	120.0	600	0.0
4	125.0	800	0.0
5	120.0	800	7.0
6	125.0	1200	0.0
7	130.0	50.0	30.0
8	130.0	1200	0.0
9	62.4	0.0	0.0



* Number after hyphen('-') is Soil Type

Case-6-1 (Case 3 + Seismic)
COFE19S - FINAL

```
COFE19S - critical flood,seismic, case 6
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=    15.0   X increment =     1.0
First Y=    41.0   Y increment =     1.0
Minimum radius=   51.0   radius increment =    1.0


Circle center at X=  15.0, Y=  41.0
FS= 1.931 at R=  51.0
Radius too large at R=  52.0
Minimum FS for center = 1.931 at R=  51.0

Circle center at X=  16.0, Y=  41.0
Tension crack too deep for circle at R=  51.0
Radius too large at R=  52.0
No valid circles at this center

Circle center at X=  16.0, Y=  40.0
Tension crack too deep for circle at R=  51.0
Radius too large at R=  52.0
No valid circles at this center

Circle center at X=  15.0, Y=  40.0
Radius too large at R=  51.0
No valid circles at this center

Circle center at X=  14.0, Y=  40.0
Radius too large at R=  51.0
No valid circles at this center

Circle center at X=  14.0, Y=  41.0
Radius too large at R=  51.0
No valid circles at this center

Circle center at X=  14.0, Y=  42.0
Radius too large at R=  51.0
No valid circles at this center

Circle center at X=  15.0, Y=  42.0
Tension crack too deep for circle at R=  51.0
Radius too large at R=  52.0
No valid circles at this center

Circle center at X=  16.0, Y=  42.0
Tension crack too deep for circle at R=  51.0
Tension crack too deep for circle at R=  52.0
Radius too large at R=  53.0
No valid circles at this center

Minimum FS found during automatic search = 1.93
Found at X=  15.0, Y=  41.0, R=  51.0


                                   SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A, Boring 19 and boring 21
Location: As-Built Station 18+00 to 23+00
File:      COFE19S   Description: critical flood seismic, case 6
```

```
Line   Left      Left      Right     Right     Density   Cohesion  Phi   Phreati
No.    X         Y         X         Y         pcf       psf       Deg   Line
  1     -30.0      0.0       0.0       0.0     130.0      1200      0     N
  2       0.0      0.0      38.0      20.0     130.0      1200      0     N
  3      38.0     20.0      56.0      20.0     130.0      1200      0     N
  4      56.0     20.0      72.0      12.0     130.0      1200      0     N
  5      72.0     12.0      84.0      12.0     130.0      1200      0     N
  6      84.0     12.0     100.0      12.0     130.0      1000      0     N
  7      64.0     -3.0      72.0       2.0     120.0       600      0     N
  8      72.0      2.0      74.0       7.0     125.0       800      0     N
  9      74.0      7.0      84.0      12.0     130.0      1000      0     N
 10      74.0      7.0     100.0       7.0     125.0       800      0     N
 11      72.0      2.0     100.0       2.0     120.0       600      0     N
 12     -30.0     -3.0      20.0      -3.0     120.0       800      7     N
 13      54.0     -3.0      64.0      -3.0     120.0       800      7     N
 14      64.0     -3.0     100.0      -3.0     120.0       800      7     N
 15      20.0     -3.0      32.0      -9.0     120.0       800      7     N
 16      42.0     -9.0      54.0      -3.0     120.0       800      7     N
 17     -30.0     -9.0      32.0      -9.0     125.0      1200      0     N
 18      32.0     -9.0      42.0      -9.0     125.0      1200      0     N
 19      42.0     -9.0     100.0      -9.0     125.0      1200      0     N
 20     -30.0    -15.0     100.0     -15.0     130.0        50     30     N
 21      32.0     17.0      56.0      15.0     130.0      1200      0     Y
 22      56.0     15.0      72.0      12.0     130.0      1200      0     Y
 23     -30.0     17.0      32.0      17.0      62.4         0      0     N

Horizontal earthquake coefficient = 0.2
Vertical earthquake coefficient = 0.05

Depth of tension crack = 2

Distributed loads
No.   Left X  Right X  Load (lbf/ft)
 1     38.0    56.0     100.0
```

```
COFE19S - critical flood,seismic, case 6
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=    69.0   X increment =     1.0
First Y=    35.0   Y increment =     1.0
Minimum radius=   38.0   radius increment =     1.0


Circle center at X=  69.0, Y=  35.0
FS= 2.395 at R=  38.0
Radius too large at R=  39.0
Minimum FS for center = 2.395 at R=  38.0

Circle center at X=  70.0, Y=  35.0
Radius too large at R=  38.0
No valid circles at this center

Circle center at X=  70.0, Y=  34.0
Radius too large at R=  38.0
No valid circles at this center

Circle center at X=  69.0, Y=  34.0
FS= 2.484 at R=  38.0
Radius too large at R=  39.0
Minimum FS for center = 2.484 at R=  38.0

Circle center at X=  68.0, Y=  34.0
FS= 2.469 at R=  38.0
Radius too large at R=  39.0
Minimum FS for center = 2.469 at R=  38.0

Circle center at X=  68.0, Y=  35.0
FS= 2.396 at R=  38.0
FS= 2.454 at R=  39.0
Minimum FS for center = 2.396 at R=  38.0

Circle center at X=  68.0, Y=  36.0
FS= 2.476 at R=  38.0
FS= 2.383 at R=  39.0
FS= 2.442 at R=  40.0
Minimum FS for center = 2.383 at R=  39.0

Circle center at X=  69.0, Y=  36.0
FS= 2.478 at R=  38.0
FS= 2.380 at R=  39.0
Radius too large at R=  40.0
Minimum FS for center = 2.380 at R=  39.0

Circle center at X=  70.0, Y=  36.0
FS= 2.487 at R=  38.0
Radius too large at R=  39.0
Minimum FS for center = 2.487 at R=  38.0

Circle center at X=  68.0, Y=  37.0
FS= 2.573 at R=  38.0
FS= 2.464 at R=  39.0
FS= 2.372 at R=  40.0
Radius too large at R=  41.0
Minimum FS for center = 2.372 at R=  40.0

Circle center at X=  69.0, Y=  37.0
```

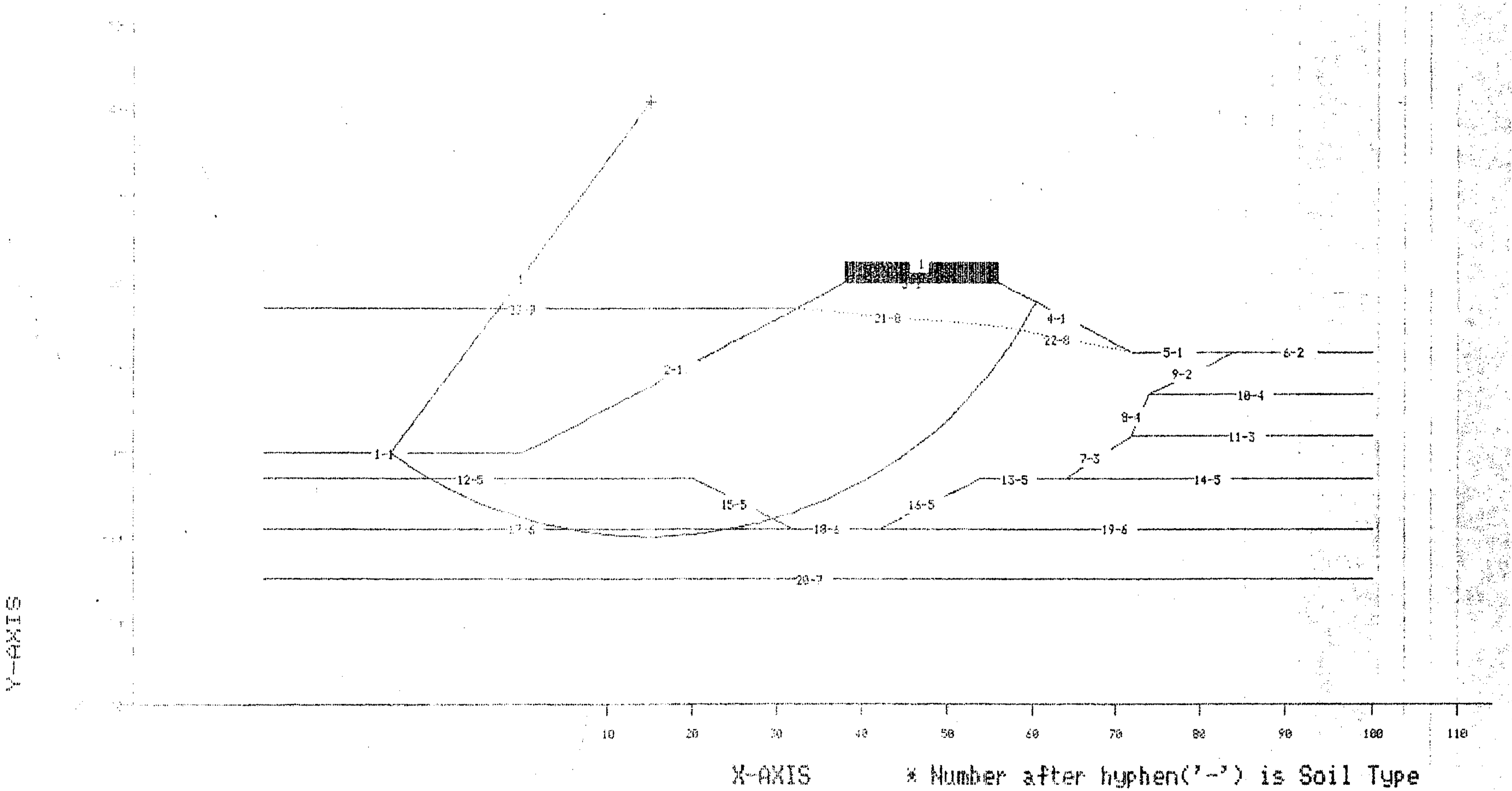
SB-SLOPE

Simplified Bishop Slope Stability Analysis

PROJECT: COYOTE REACH 2A, Boring 19 and boring 21
LOCATION: As-Built Station 18+00 to 23+00
FILE: COFE19F
COMPLETE SLOPE CROSS SECTION

CIRCLE	X	Y	RADIUS	FS
1	15.0	41.0	51.0	3.52

SOIL*	DENSITY	COHESION	PHI
1	130.0	1200.0	0.0
2	130.0	1000.0	0.0
3	120.0	600.0	0.0
4	125.0	800.0	0.0
5	120.0	800.0	7.0
6	125.0	1200.0	0.0
7	130.0	50.0	30.0
8	130.0	1200.0	0.0
9	62.4	0.0	0.0



* Number after hyphen('-') is Soil Type

FINAL

COFE19F - CASE 4.

```
COFE19F - critical flood,case 3, steady seepage
AUTOMATIC SEARCH ANALYSIS
Approximately 30 slices selected
First X=   15.0   X increment =    1.0
First Y=   41.0   Y increment =    1.0
Minimum radius=   46.0   radius increment =    1.0


Minimum FS found during automatic search = 3.52
Found at X=  15.0, Y=  41.0, R=  51.0



                                     SB-SLOPE

PROJECT DATA
Project: COYOTE REACH 2A, Boring 19 and boring 21
Location: As-Built Station 18+00 to 23+00
Filename: COFE19F   Description: critical flood,case 3, steady seepage

ANALYSIS DATA
Line    Left      Left      Right     Right     Density  Cohesion  Phi    Phreati
No.     X         Y         X         Y         pcf      psf       Deg    Line
  1     -30.0       0.0       0.0       0.0     130.0     1200      0     N
  2       0.0       0.0      38.0      20.0     130.0     1200      0     N
  3      38.0      20.0      56.0      20.0     130.0     1200      0     N
  4      56.0      20.0      72.0      12.0     130.0     1200      0     N
  5      72.0      12.0      84.0      12.0     130.0     1200      0     N
  6      84.0      12.0     100.0      12.0     130.0     1000      0     N
  7      64.0      -3.0      72.0       2.0     120.0      600      0     N
  8      72.0       2.0      74.0       7.0     125.0      800      0     N
  9      74.0       7.0      84.0      12.0     130.0     1000      0     N
 10      74.0       7.0     100.0       7.0     125.0      800      0     N
 11      72.0       2.0     100.0       2.0     120.0      600      0     N
 12     -30.0      -3.0      20.0      -3.0     120.0      800      7     N
 13      54.0      -3.0      64.0      -3.0     120.0      800      7     N
 14      64.0      -3.0     100.0      -3.0     120.0      800      7     N
 15      20.0      -3.0      32.0      -9.0     120.0      800      7     N
 16      42.0      -9.0      54.0      -3.0     120.0      800      7     N
 17     -30.0      -9.0      32.0      -9.0     125.0     1200      0     N
 18      32.0      -9.0      42.0      -9.0     125.0     1200      0     N
 19      42.0      -9.0     100.0      -9.0     125.0     1200      0     N
 20     -30.0     -15.0     100.0     -15.0     130.0       50     30     N
 21      32.0      17.0      56.0      15.0     130.0     1200      0     Y
 22      56.0      15.0      72.0      12.0     130.0     1200      0     Y
 23     -30.0      17.0      32.0      17.0      62.4        0      0     N

Depth of tension crack = 0

Distributed loads
No.   Left X  Right X  Load (lbf/ft)
 1      38.0    56.0     100.0
 FS= 2.463 at R=  39.0
 Radius too large at R=  40.0
 Minimum FS for center = 2.463 at R=  39.0

 Circle center at X=  70.0, Y=  37.0
 FS= 2.588 at R=  38.0
 FS= 2.469 at R=  39.0
 Radius too large at R=  40.0
 Minimum FS for center = 2.469 at R=  39.0

 Circle center at X=  67.0, Y=  36.0
 FS= 2.482 at R=  38.0
 FS= 2.391 at R=  39.0
 FS= 2.443 at R=  40.0
 Minimum FS for center = 2.391 at R=  39.0

 Circle center at X=  67.0, Y=  37.0
 FS= 2.577 at R=  38.0
 FS= 2.471 at R=  39.0
 FS= 2.380 at R=  40.0
 FS= 2.444 at R=  41.0
 Minimum FS for center = 2.380 at R=  40.0

 Circle center at X=  67.0, Y=  38.0
 FS= 2.693 at R=  38.0
 FS= 2.567 at R=  39.0
 FS= 2.462 at R=  40.0
 FS= 2.382 at R=  41.0
 FS= 2.446 at R=  42.0
 Minimum FS for center = 2.382 at R=  41.0

 Circle center at X=  68.0, Y=  38.0
 FS= 2.691 at R=  38.0
 FS= 2.561 at R=  39.0
 FS= 2.453 at R=  40.0
 FS= 2.363 at R=  41.0
 Radius too large at R=  42.0
 Minimum FS for center = 2.363 at R=  41.0

 Circle center at X=  69.0, Y=  38.0
 FS= 2.695 at R=  38.0
 FS= 2.561 at R=  39.0
 FS= 2.450 at R=  40.0
 Radius too large at R=  41.0
 Minimum FS for center = 2.450 at R=  40.0

 Circle center at X=  67.0, Y=  39.0
 FS= 2.835 at R=  38.0
 FS= 2.683 at R=  39.0
 FS= 2.559 at R=  40.0
 FS= 2.455 at R=  41.0
 FS= 2.385 at R=  42.0
 Radius too large at R=  43.0
 Minimum FS for center = 2.385 at R=  42.0

 Circle center at X=  68.0, Y=  39.0
 FS= 2.832 at R=  38.0
 FS= 2.678 at R=  39.0
 FS= 2.551 at R=  40.0
 FS= 2.445 at R=  41.0
 Radius too large at R=  42.0
 Minimum FS for center = 2.445 at R=  41.0

 Circle center at X=  69.0, Y=  39.0
 FS= 2.842 at R=  38.0
```

```
FS= 2.680 at R=  39.0
FS= 2.549 at R=  40.0
FS= 2.440 at R=  41.0
Radius too large at R=  42.0
Minimum FS for center = 2.440 at R=  41.0

Minimum FS found during automatic search = 2.36
Found at X=  68.0, Y=  38.0, R=  41.0
```

Project: COYOTE CREEK IMPROVEMENTS
Santa Clara County, California

Log of Boring No. 19

Date Drilled: September 20, 1983
Type of Boring: 6-inch auger
Hammer Weight: 140 lbs.

Remarks: Boring drilled on top of sludge lagoon levee
(See Legend Sheet for sampler types and hammer weights)

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION	LABORATORY TESTS Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength, psf
			Surface Elevation: 16± feet			
	1 ▨	17	SILTY CLAY - CLAYEY SILT FILL (CL-ML) Well compacted, moist, brown	12	120	13,790
	2 ▨	21	PI = 9	13	109	4820
5						
	3 ▨	14	CLAYEY SILT FILL (ML-CL): Moderately compacted, moist to wet, brown, slightly sandy (FILL)	19	105	2100
	4 ▨	10	SILTY CLAY (CL) Medium, moist to wet, gray-brown, with roots	25	98	1070
10						
			▽ 9-22-83			
			▽ ATD			
			SILTY CLAY (CH)			
	5 ▨	9	Medium, dark gray-brown	29	93	1710
15						
			SILTY CLAY (CL)			
	6 ▨	16	Very stiff, brown and gray mottled with tan streaks	22	105	4530
20						
			Free groundwater encountered during drilling			
			SILTY CLAY (CL)			
	7 ▨	10	Stiff, brown and light gray mottled, very silty with some fine sand	-	-	-
25						
	8 ▨	17		-	-	-
30			BOTTOM OF BORING @ 30 feet			

Proj. No. 15945W

Woodward-Clyde Consultants

Figure A-22

Project: COYOTE CREEK IMPROVEMENTS
Santa Clara County, California

Log of Boring No. 20

Date Drilled: September 20, 1983
Type of Boring: 6-inch auger
Hammer Weight: 140 lbs.

Remarks:

(See Legend Sheet for sampler types and hammer weights

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION	LABORATORY TESTS Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength,
			Surface Elevation: 11± feet			
			SANDY SILT (ML) Very loose, moist, brown			
	1	6	PI : Non-plastic	22	100	2140
			CLAYEY SILT - SILTY CLAY (ML-CL) Stiff, moist, brown			
5	2	4	--Soft, wet ATD PI = 10	31	91	830
	3	12	SILTY SAND (SM): Loose, brown	-	-	-
			SILTY CLAY (CH) Medium, dark gray-brown			
10	4	12	PI = 43	28	92	1610
	5	20	SILTY CLAY (CL-CH) Very stiff, gray-brown mottled with some sand inclusions	21	106	5850
15						
20	6	16		-	-	-
	7	-		-	-	-
			BOTTOM OF BORING @ 23 feet			
25						
30						

Proj. No. 15945W

Woodward·Clyde Consultants

Figure A-23

Project: COYOTE CREEK IMPROVEMENTS
Santa Clara County, California

Log of Boring No. 21

Date Drilled: September 20, 1983
Type of Boring: 6-inch auger
Hammer Weight: 140 lbs.

Remarks: Boring drilled on top of sludge lagoon levee

(See Legend Sheet for sampler types and hammer weights

Depth, Ft.	Samples	Blows/Ft.	MATERIAL DESCRIPTION	LABORATORY TESTS Moisture Content, %	Dry Density, pcf	Unconfined Compressive Strength,
			Surface Elevation: 15½± feet			
			(19)			
	1 ▨	17(17	**SILTY CLAY - CLAYEY SILT FILL (CL-ML)** Well compacted, moist, gray-brown	13 (12)	113 120	6670 13,790
5	2 ▨	31 (21)	With partings of sandy clayey Silt (ML) PI = 11 5	15 (13)	113 109	5900 4820
	3 ▨	33 (14)	ML-CL (FILL)	16 (19)	112 (105)	7890 (2,100)
10	4 ▨	8 (10)	**SILTY CLAY (CL-ML)** Medium, moist to wet, gray-brown with roots 10	22 (25)	98 (98)	1220 (1070)
15	5 ▨	11 (9)	**SILTY CLAY (CH)** Stiff, moist, dark gray-brown 15 17	25 (29)	97 (93)	3410 (1710
20	6 ▨	20 (16)	**SILTY CLAY (CL-CH)** Very stiff, moist, brown and light gray mottled	21 (22)	106 105	5850 4530
			▽ ATD			
25	7 ▨	(22) (10)	CL	-	-	-
			γ=125 φ = 30°, c=0			
30	8 ▨	12 (8)	**SILTY SAND (SM):** Medium dense, brown	-	-	-
			BOTTOM OF BORING @ 30 feet			

Proj. No. 15945W

Woodward-Clyde Consultants

Figure A-24

EMBANKMENT AND FOUNDATION STABILITY

1. Describe the basis for selection of critical location for analysis:

☐ Overall height: Sta_______________, height___________________ft.

☐ Limiting foundation soil strength:

Sta__________________, depth____________________to___________________

strength $\varnothing$ = ____________degrees, c = _________________psf

☐ slope: SS = ______________(h) to_________________(v)

(Repeat as needed on an added sheet for additional locations)

2. Specify the embankment stability analyses methodology used (e.g. circular arc, sliding block, infinite slope, etc.):____

3. Summary of stability analysis results:

SEE ATTACHED

Case	Loading Conditions	Critical Safety Factor	Criteria (Min.)
I	End of construction	______________	1.3
II	Sudden drawdown	______________	1.0
III	Critical flood stage	______________	1.4
IV	Steady seepage at flood stage	______________	1.4
VI	Earthquake (Case I or III)	______________	1.0

(Reference: U.S. Army Corps of Engineers EM-1110-2-1913 Table 6-1)

4. Was a seepage analysis for the embankment performed? ☐ Yes ☐ No

Describe methodology used:____

5. Was a seepage analysis for the foundation performed? ☐ Yes ☐ No

Were uplift pressures at the embankment landside toe checked? ☐ Yes ☐ No

Were seepage exit gradients checked for piping potential? ☐ Yes ☐ No

6. The duration of 100-year flood hydrograph against the embankment is____________Hrs.

Note: Attach engineering analysis to support construction plans.

EMBANKMENT AND FOUNDATION STABILITY

1. Describe analysis submittal based on Code:

☐ UBC (1988) or ☐ Other (specify)________________

2. Stability analysis submitted provides for:
☐ Overturning; ☐ Sliding; If not, explain________________

____

3. Loading included in the analyses were:

☐ Lateral earth @ P_A = ________psf; P_P = ________psf
☐ Surcharge--Slope @________, ☐ surface________psf
☐ Wind @ P_W = ________psf
☐ Seepage (Uplift); ☐ Earthquake @ P_{eq} = ________%g
☐ 100-year significant wave height________ft.
☐ 100-year significant wave period________sec. N/A

4. Summary of Stability Analysis Results: Factors of Safety. Itemize for each range in site layout dimension and loading condition limitation for each respective reach.

Loading Condition	Criteria (Min)		Sta____	To____	Sta____	To____
	Overturn	Sliding	Overturn	Sliding	Overturn	Sliding
Dead & Wind	1.5	1.5				
Dead & Soil	1.5	1.5				
Dead, Soil, Flood & Impact	1.5	1.5				
Dead, Soil & Seismic	1.3	1.3				

(Ref: FEMA 114 Sept 1986; COE EM 1110-2-2502)

(Note: Extend table on an added sheet as needed and reference)

5. Foundation bearing strength for each soil type:

Bearing Pressure	Sustained Load	Short Term Load
Computed design maximum	________psf	________psf
Maximum allowable	________psf	________psf

6. Foundation scour protection ☐ is, ☐ is not provided, (describe)

____

Note: Attach engineering analysis to support construction plans.

SETTLEMENT

1. Anticipated potential settlement has been determined and incorporated into the specified construction elevations to maintain the established freeboard margin.
☒ Yes ☐ No

2. The computed range of settlement is 0.5 ft. to 0.75 ft. PER SOILS REPORT

3. Settlement of the levee crest is determined to be primarily from:

☒ Foundation consolidation
☐ Embankment compression
☐ Other (describe)

4. Differential settlement of floodwalls NO FLOODWALLS
☐ has ☐ has not been accommodated in the structural design and construction.

Note: Attach engineering analysis to support construction plans.

INTERIOR DRAINAGE

1. Specify size of each interior watershed

Draining to pressure conduit 1.5 MILE^2 DRAINS TO 4 PUMP STATIONS
Draining to ponding area

2. Relationships Established

Ponding elevation vs. storage ☐ Yes ☒ No
Ponding elevation vs. gravity flow ☐ Yes ☒ No
Differential head vs. gravity flow ☐ Yes ☒ No

3. The river flow duration curve is enclosed ☐ Yes ☒ No

4. Specify the discharge capacity of the head pressure conduit SEE ATTACHMENT

5. Which Flooding Conditions Were Analyzed?

- Gravity flow (Interior Watershed) ☒ Yes ☐ No
- Common storm (River Watershed) ☒ Yes ☐ No
- Historical ponding probability ☐ Yes ☒ No
- Coastal wave overtopping ☐ Yes ☒ No

If no, explain why: SEE ATTACHMENT FOR DETAILED DESCRIPTION OF INTERIOR DRAINAGE CALCULATIONS AND DESCRIPTION OF METHODOLOGY. INTERIOR WATERSHED IS OUT OF TIDAL ZONE.

6. Interior drainage has been analyzed based on joint probability of interior and exterior flooding and the capacities of pumping and outlet facilities to provide the established level of flood protection.
☒ Yes ☐ No

If no, explain why:

7. The rate of seepage through the levee system for the 100-year flood is N/A cfs
KEYWAYS WERE INSTALLED UNDER LEVEES TO MINIMIZE SEEPAGE.

INTERIOR DRAINAGE (Cont'd)

1. The length of levee system used to drive this seepage rate is N/A ft.

9. Will a pumping plant(s) be used for interior drainage? ☒ Yes ☐ No

If yes, include the number of pumping plants: 4

For each pumping plant, list:

	Plant #1	Plant #2
The number of pumps	SEE ATTACHMENT	
The ponding storage capacity		
The maximum pumping rate		
The maximum pumping head		
The pumping starting elevation		
The pumping stopping elevation		
Is the discharge facility protected?		
Is there a flood warning plan?		
How much time is available between warning and flooding?		

Will the operations be automatic? ☒ Yes ☐ No

If the pumps are electric, are there backup power sources? ☒ Yes ☐ No

(Reference: U.S. Army Corps of Engineers EM-1110-2-3101, 3102, 3103, 3104, and 3105)

Note: Include a copy of supporting documentation of data and analysis. Provide a map showing the flooded area and maximum ponding elevations for all interior watersheds that result in flooding.

OTHER DESIGN CRITERIA

1. The following items have been addressed as stated:

Liquifaction ☐ is ☒ is not a problem.

Hydrocompaction ☐ is ☒ is not a problem

Heave differential movement due to soils of high shrink/swell ☐ is ☒ is not a problem.

2. For each of these problems, state the basic facts and corrective action taken.

If the levee/floodwall is new or enlarged, will the structure adversely impact flood levels and/or flow velocities floodside of the structure? ☐ Yes ☒ No

Note: Attach supporting documentation

The planned/installed works are in full compliance with NFIP regulations, Section 44 CFR Ch. 1. 65.10

☒ Yes ☐ No

OPERATIONAL PLAN AND CRITERIA

1. The operation plan incorporates all the provisions for closure devices as required in Section 65.10 (c) (1), of the NFIP regulations

☒ Yes ☐ No

2. The operation plan incorporates all the provisions for interior drainage as required in Section 65.10 (c) (2), of the NFIP regulations

☒ Yes ☐ No

If no to either of the above, please explain.

____

____

____

____

FEDERAL EMERGENCY MANAGEMENT AGENCY
LEVEE/FLOODWALL SYSTEM ANALYSIS FORM (FORM 8)

SANTA CLARA VALLEY WATER DISTRICT
COYOTE CREEK FLOOD CONTROL PROJECT
Interior Drainage East of Coyote Creek

Purpose. This report attached to FEMA Form 8 details the hydrologic and hydraulic analyses that form the basis for revising effective FIRM Nos. 060337-0060E, 060337-0070E, and 060344-0003E (effective date February 19, 1986) based on the completion of the Coyote Creek Flood Control Project from San Francisco Bay to Montague Expressway (described in detail on a separate Form 4 contained within this LOMR package). Project levees contain the one-percent discharge within the creek channel, so there are no longer overflows to the east or west of Coyote Creek downstream of Trimble Road / Montague Expressway. This report concentrates on east side of the creek.

Area of Revision. The area of zone revision is bound by Coyote Creek to the west, Interstate 880 (Nimitz Freeway) to the east, Lower Penitencia Creek to the north, and Montague Expressway/Trimble Road to the south. LOMR work maps show the area of revision and the four City of Milpitas storm water pumping stations.

Four large storm water pump stations owned and operated by the City of Milpitas are, as the following analysis demonstrates, adequate to discharge local 100-year runoff into Coyote Creek. The interior area is drained by a system of stormwater pipes, which except for localized exceptions, is adequate to drain the subject area without leaving a residual floodplain. The exceptions — three localized areas with a ponding depth of slightly more than one foot — are described later.

Methodology. Without overflow from Coyote Creek, the only sources of flooding to the area of revision are local runoff (interior drainage) and runoff through the Nimitz Freeway from the east. In the past equalization culverts beneath Interstate 880 allowed water to move across the freeway in either direction. However, because these culverts allowed spill from Coyote Creek to move *east*, they were plugged, so Interstate 880 currently intercepts all drainage and floodwater from the east. This analysis, therefore, examines runoff due to rainfall within a closed basin bounded as described above.

Pump station performance is evaluated assuming that an *instantaneous* peak interior discharge is coincident with the peak 100-year post-project stage within Coyote Creek. Coyote Creek stage is taken from the post-project conditions model, prepared by Santa Clara Valley Water District, included in this package. Coyote Creek's one-percent discharge has not changed from the effective FIS. As part of the effective FIS, 100-year hydrographs were estimated for the interior drainage area covered by this LOMR request. However, the original hydrology uses a three day storm with a sixty minute time interval, so it is likely that the original hydrologic model underestimates the instantaneous peak runoff for the interior basin, given that the time of concentration within the local drainage area is on the order of one-half hour. The most appropriate estimate of an instantaneous peak discharge for basins less than one square mile in area may be found by using the rational method (ref. 2).

Milpitas is immediately adjacent to the southern border of western Alameda County, so Alameda County Flood Control and Water Conservation District procedures for western Alameda County (ref. 2) have been used to estimate peak 100-year discharge and route the flow through the existing storm drain system. Pump station drainage areas and storm drain system parameters are taken from "as-built" information provided by the City of Milpitas (ref. 1). Estimates at each pump station are compared to Santa Clara Valley Water District's regional regression equation for estimating peak 100-year discharge from small basins (ref. 3). The larger of the two values is used as the peak discharge estimate into each pump station. Storm drain capacity is calculated using the rational formula .

Pump Station Capacities. Estimated peak inflow into each pump station is compared to the pump station's capacity. Pump capacity calculations are based on information regarding pump station operation and pump characteristics provided by the City of Milpitas and summarized in Table 1. Detailed hydraulic calculations for peak 100-year discharge and pump station capacity are also attached. Santa Clara Valley Water District's regional regression equation for small watersheds takes the form given below.

$$Q_{100} = 175\, A^{0.76}\, P^{0.36}$$

$$\begin{aligned} \textit{where}\quad A &= \textit{basin area } (mi^2) \\ P &= \textit{mean annual precipitation (inches)} \end{aligned}$$

Mean annual precipitation for the local area is 14 inches (ref. 2). Each pump station has three identical stormwater pumps. Characteristic pump curves are attached.

Table 1

Pump Station Summary

	Area (mi²)	Highest on Level (NGVD)	Coyote Creek Tailwater		Pump Station Capacity (cfs)	100-year Peak Discharge (cfs)	
			Station	100-year Stage (NGVD)		Rational	Regression
McCarthy Ranch	0.50	-4.7	14+500	15.9	380	260	270
Bellew	0.37	9.5	61+600	30.0	380	190	210
Murphy Ranch	0.21	14.2	63+600	31.3	200	90	140
Oak Creek	0.44	17.3	67+800	35.6	320	230	240

Table 1 demonstrates that each pump station has sufficient capacity to pump the instantaneous peak 100-year inflow against a coincident 100-year peak stage in Coyote Creek. In fact the Bellew and Murphy Ranch Pump Stations can pump the 100-year inflow with only two of three pumps in operation. Both McCarthy Ranch and Oak Creek Pump Stations would have two pumps constantly running and a third pump cycling on and off during a 100-year event.

Storm Drain Capacity. City of Milpitas "as-built" information has been used to route runoff through the interior storm drain systems, as detailed on the attached interior drainage calculation sheets. Starting at each pump station with a hydraulic grade equivalent to the highest pump on-level set by the City of Milpitas, the hydraulic grade is calculated for each pipe segment using Manning's equation for friction loss:

$$\textit{head loss} = \frac{2.87\ n\ l\ v^2}{d^{4/3}}$$

Typically a Manning's "n" value of 0.012 to 0.013 is used for large diameter reinforced concrete pipes. In lieu of examining head losses at junction boxes and manholes, a slightly more conservative n value of 0.015 has been used for hydraulic grade calculations. (Actually, there is no change in mapping for n values between 0.012 and 0.015.)

Where the hydraulic grade falls below the top of pipe, Manning's equation is used to obtain pipe capacity for open channel flow. Pipe slopes are taken from the City of Milpitas "as-builts". "Ground elevation" on the calculation sheets refers to the top of curb adjacent to a drainage inlet or manhole. Any hydraulic grade that is more than one foot above top of curb must be mapped as an AH zone. Flooding depths less than one foot are considered to be Zone C, an area of minimal flooding.

Calculations indicate that the only area where this occurs is within the Oak Creek Pump Station drainage basin, specifically near the intersection of Sycamore Drive and Barber Lane, Buckeye Drive, and near the intersection of Cottonwood Drive and Barber Lane. These are areas of lower relief toward the beginning of the storm drain system (i.e. the farthest away from the pump station.

At the worst point, the hydraulic grade line is over seven feet above the adjacent ground elevation. However, actual water depth is controlled by the grade at which water can escape the low area, flow down a street and enter another storm drain inlet.

Milpitas plans show that at Sycamore Drive and Barber Lane, the level of ponding is controlled by a high point in Barber Lane to the north at **elevation 26±** (top of curb). At this elevation, storm water spilling down Barber Lane enters a storm drain inlet at the intersection of Barber Lane with Alder Drive, where the storm drain system (for Murphy Ranch Pump Station) has excess capacity. Along Buckeye Drive stormwater will pond in a low spot to **elevation 29±**, where it releases downhill along Buckeye Drive to Sycamore Drive. At the point at which the hydraulic grade exceeds the street elevation on Cottonwood Drive, the street slopes continuously downhill toward Barber Lane, which also slopes continuously downhill to the intersection of Sycamore Drive. Thus, spills from this portion of the storm drain will be carried in the street right-of-way to the aforementioned low spot at Sycamore Drive and Barber Lane. Because of the extra water from other areas, the ponding elevation along Barber Lane will be mapped at **elevation 27**. The hydraulic grade at the end of the storm drain line on McCarthy Boulevard near Montague Expressway is about 1.1 feet higher than adjacent ground. Water spilling from this inlet would move downhill to the north along McCarthy Boulevard and enter the next adjacent inlet. Ponding is mapped at **elevation 34,** which is the hydraulic grade line at this adjacent inlet.

References

1. City of Milpitas, Storm Drain System Map and As-Built plans for McCarthy Ranch, Milpitas Business Park and Oak Creek Business Park, dates vary.

2. Alameda County Flood Control and Water Conservation District, *Hydrology and Hydraulics Criteria Summary for Western Alameda County*, February 1987.

3. Santa Clara Valley Water District, *Development of Regional Regression Equations for Solution of Certain Hydrologic Problems in and Adjacent to Santa Clara County*, November 1976.

Coyote Creek Flood Control Project
Interior Drainage

McCarthy Ranch Pump Station

Description	Area (acres)	Cumulative Area (acres)	tc (min)	Ix (1/hr)	I (in/hr)	Q (cfs)	Pipe Diameter (in)	Velocity (fps)	Travel Time (min)	Pipe Slope (ft/ft)	Pipe Capacity (cfs)	Length (feet)	Head Loss (feet)	HGL	Top of Pipe	Ground Elevation	Depth of Water (feet)
24" SD in McCarthy Blvd.	10	10	10.0	0.149	2.09	13.0	24	4.1	1.7		0	427	1.88	17.0	10.25	16.6	0.4
30" SD in McCarthy Blvd.	15	25	11.7	0.136	1.90	30.7	30	6.3	1.1		0	275	2.05	15.1	5.81	15.33	-0.2
42" SD in McCarthy Blvd.	28	53	12.9	0.130	1.82	62.6	42	6.5	1.5		0	582	2.99	13.1	6.01	14.23	-1.2
48" SD in McCarthy Blvd.	32	85	14.3	0.126	1.76	97.5	48	7.8	2.2	0.0026	64	1008	6.17	10.1	4.71	11.46	-1.4
36" SD in Ranch Drive	33	33	10.0	0.149	2.09	44.7	36	6.3	2.1	0.0020		800	4.78	13.7	8.35	13.59	0.1
48" SD in Ranch Drive	21	54	12.1	0.136	1.90	66.8	48	5.3	4.1	0.0020	56	1309	3.77	8.9	7.26	11.49	-2.6
54" SD in Ranch Drive	8	62	16.2	0.117	1.64	66.0	54	4.2	2.2	0.0020	76	547			5.13	10.57	-5.4
72"SD in McCarthy Blvd.	147	147	18.4	0.111	1.55	148.5	72	5.3	2.8	0.0026	187	890	1.45	3.4	3.92	10.29	-6.4
78" SD in McCarthy Blvd.	73	220	21.2	0.102	1.43	204.2	78	6.2	1.8	0.0026		663	1.34	1.9	1.35	11.12	-9.2
78" SD in McCarthy Blvd.	34	254	23.0	0.098	1.37	226.5	78	6.8	3.5	0.0026		1436	3.56	0.6	-0.37	11.34	-10.8
84" SD in McCarthy Blvd.	33	287	26.5	0.091	1.27	237.7	84	6.2	1.2	0.0026		432	0.79	-3.0	-4.17	10.1	-13.1
84" SD to Pump Station	33	320	27.7	0.088	1.23	256.3	84	6.7	1.1	0.0027		430	0.92	-3.8	-5.28	9.85	-13.6
Pump Station														-4.7			

Hydrologic and Hydraulic Parameters

Mean Annual Precipitation = 14 inches C = 0.65 n = 0.015

Coyote Creek Flood Control Project
Interior Drainage

Bellew Pump Station

Description	Area (acres)	Cumulative Area (acres)	tc (min)	Ix (1/hr)	I (in/hr)	Q (cfs)	Pipe Diameter (in)	Velocity (fps)	Travel Time (min)	Pipe Slope (ft/ft)	Pipe Capacity (cfs)	Length (feet)	Head Loss (feet)	HGL	Top of Pipe	Ground Elevation	Depth of Water (feet)
Barber Lane A-2 to D-14	13	13	10.0	0.149	2.09	17.6	36	2.5	2.0	0.0020	26	300	0.28				
D-14 to D-11	7	20	12.0	0.136	1.90	24.5	42	2.5	2.0	0.0010	28	300	0.24				
D-11 to D-8	8	27	14.0	0.126	1.76	31.4	48	2.5	2.3	0.0013	45	340	0.22				
D-8 to D-1	9	36	16.2	0.117	1.64	38.8	48	3.1	1.7	0.0020	56	310	0.30	15.4	15.81		
A-1 to D-1	13	13	10.0	0.149	2.09	17.2	36	2.4	3.4	0.0020	26	500	0.44	15.6	16.2		
Bellew Drive D-1 to D-5	12	61	17.9	0.111	1.55	61.7	48	4.9	1.5	0.0028	66	450	1.10	15.1	15.19	21.9	-6.8
D-5 to F-5	3	64	19.4	0.108	1.51	63.0	60	3.2	2.0	0.0035	134	380	0.30	14.0	13.92	18.8	-4.9
Cypress Drive F-1 to F-5	13	13	10.0	0.149	2.09	18.2	30	3.7	1.9	0.0030	20	420	1.10	14.8	11.54	20	-8.5
Bellew Drive F-5 to F-6	0	78	21.4	0.102	1.43	71.9	60	3.7	0.4	0.0035	134	80	0.08	13.7	12.62	18.2	-4.5
F-6 to F-9	4	82	21.8	0.100	1.40	74.4	60	3.8	1.2	0.0047	155	280	0.30	13.7	12.34	18.5	-4.8
McCarthy Blvd. C-1 to F-21	6	6	10.0	0.149	2.09	7.6	36	1.1	2.8	0.0030	32	180	0.03	13.5	13.05	18.9	-5.4
F-21 to F-18	3	9	12.8	0.130	1.82	10.4	36	1.5	2.8	0.0030	32	250	0.08	13.5	12.41	20	-6.5
F-18 to F-15	3	12	15.6	0.119	1.67	13.1	42	1.4	1.8	0.0030	48	150	0.03	13.4	11.67	19.5	-6.1
F-15 to F-9	3	15	17.5	0.113	1.58	14.9	42	1.6	0.9	0.0030	48	80	0.02	13.4	11.24	18.7	-5.3
Bellew Drive F-9 to E-8	5	101	23.0	0.098	1.37	90.3	66	3.8	2.3	0.0034	170	530	0.51	13.3	11	19	-5.7
E-8 to E-7	16	118	25.3	0.093	1.30	99.5	66	4.2	1.0	0.0030	160	250	0.29	12.8	9.49	19.3	-6.5
E-7 to E-1	13	131	26.3	0.092	1.29	109.5	66	4.6	1.1	0.0034	170	300	0.42	12.5	8.74	19	-6.5
E-1 to B-1	6	137	27.4	0.090	1.26	112.0	66	4.7	1.0	0.0035	172	290	0.43	12.1	7.69	19.2	-7.1
B-1 to A-4	7	144	28.4	0.088	1.23	115.1	72	4.1	1.6	0.0030	201	390	0.38	11.7	6.65	20	-8.3
Sumac Drive C-4 to C-8	7	7	10.0	0.149	2.09	9.9	21	4.1	0.9	0.0024		220	1.14	18.4	17	21.6	-3.2
C-8 to C-11	1	8	10.9	0.142	1.99	10.7	27	2.7	2.2	0.0025		350	0.56	17.2	16.32	21.3	-4.1
C-11 to B-6	9	17	13.1	0.130	1.82	20.3	33	3.4	1.7	0.0024		340	0.67	16.7	15.46	20.6	-3.9
B-6 to E-4	12	29	14.7	0.121	1.69	32.3	36	4.6	1.8	0.0024		500	1.55	16.0	14.64	20.2	-4.2
Murphy Ranch Rd E-4 to E-1	11	41	16.5	0.116	1.62	42.7	39	5.1	0.6	0.0056		190	0.67	14.5	13.56	20.4	-5.9
E-1 to B-5	2	43	17.1	0.114	1.60	44.5	42	4.6	0.8	0.0053		230	0.60	13.8	9.44	19.9	-6.1
B-5 to B-2	8	51	18.0	0.111	1.55	51.7	42	5.4	0.6	0.0053		190	0.67	13.2	8.22	19.2	-6.0
B-2 to A-8	6	58	18.6	0.109	1.53	57.1	48	4.5	1.5	0.0031		400	0.84	12.5	7.21	18.1	-5.6
A-8 to A-4	7	64	20.0	0.105	1.47	61.2	48	4.9	0.5	0.0040		150	0.36	11.7	6.07	19.4	-7.7
Discharge to Pump Station	30	238	30.0	0.085	1.19	184.2	72	6.5	1.8	0.0030		720	1.81	11.3	5.99	19.2	-7.9
Pump Station														9.5			

Hydrologic and Hydraulic Parameters

Mean Annual Precipitation =	14 inches	C =	0.65	n =	0.015

Coyote Creek Flood Control Project
Interior Drainage

Murphy Ranch Pump Station

Description	Area (acres)	Cumulative Area (acres)	tc (min)	Ix (1/hr)	I (in/hr)	Q (cfs)	Pipe Diameter (in)	Velocity (fps)	Travel Time (min)	Pipe Slope (ft/ft)	Pipe Capacity (cfs)	Length (feet)	Head Loss (feet)	HGL	Top of Pipe	Ground Elevation	Depth of Water (feet)
Barber Lane B-1 to B-4	12	12	10.0	0.149	2.09	16.0	30	3.3	2.0	0.0010	11	400	0.81	21.4	19.22	25.0	-3.6
B-4 to E-2	0	12	12.0	0.136	1.90	14.6	36	2.1	3.2	0.0010	18	420	0.27	20.6	19.30	25.0	-4.4
E-2 to E-5	15	26	15.3	0.121	1.69	29.1	42	3.0	2.8	0.0010	28	510	0.57	20.3	19.37	24.8	-4.5
E-5 to B-7	10	37	18.1	0.111	1.55	37.0	42	3.8	2.0	0.0010	28	460	0.83	19.8	18.87	25.0	-5.2
Alder Lane B-7 to B-6	3	40	20.1	0.105	1.47	37.7	48	3.0	1.4	0.0010	39	260	0.24	19.0	18.91	26.2	-7.2
B-6 to B-3	8	48	21.5	0.101	1.41	43.9	48	3.5	1.1	0.0010	39	240	0.30	18.7	18.65	25.0	-6.3
B-3 to B-1	8	55	22.7	0.098	1.37	49.4	48	3.9	1.5	0.0010	39	350	0.55	18.4	18.42	24.0	-5.6
B-1 to A-8	5	60	24.2	0.095	1.33	51.9	54	3.3	1.1	0.0021		210	0.19	18.4	18.57	24	-5.4
A-8 to D-4	7	67	25.2	0.093	1.30	56.9	54	3.6	2.3	0.0021		500	0.56	18.2	17.83	26	-7.8
D-4 to D-1	10	78	27.6	0.088	1.23	62.1	54	3.9	2.1	0.0021		500	0.66	17.6	17.04	25	-7.4
D-1 to F-2	7	85	29.7	0.085	1.19	65.7	60	3.3	2.4	0.0021		480	0.41	17.0	16.02	23.5	-6.5
McCarthy Blvd. F-2 to F-7	9	94	32.1	0.082	1.15	69.8	60	3.6	1.9	0.0018		400	0.38	16.6	14.80	22	-5.4
F-7 to C-3	8	101	34.0	0.080	1.12	73.7	60	3.8	1.9	0.0018		420	0.45	16.2	14	21.3	-5.1
Magnolia Dr C-3 to F-11	12	113	35.8	0.078	1.09	80.5	60	4.1	1.8	0.0020		450	0.57	15.7	13.25	22	-6.3
Murphy Ranch Rd F-11 to E-8	8	121	37.7	0.075	1.05	82.6	60	4.2	1.5	0.0024		380	0.51	15.2	12.29	21.8	-6.6
E-8 to Pump Station	12	133	39.2	0.074	1.04	89.2	66	3.8	2.1	0.0030		480	0.45	14.7	10.89	21.9	-7.2
Pump Station														14.2			

Hydrologic and Hydraulic Parameters

Mean Annual Precipitation =	14 Inches	C =	0.65	n =	0.015

Coyote Creek Flood Control Project
Interior Drainage

Oak Creek Pump Station

Description	Area (acres)	Cumulative Area (acres)	tc (min)	Ix (1/hr)	I (in/hr)	Q (cfs)	Pipe Diameter (in)	Velocity (fps)	Travel Time (min)	Pipe Slope (ft/ft)	Pipe Capacity (cfs)	Length (feet)	Head Loss (feet)	HGL	Top of Pipe	Ground Elevation	Depth of Water (feet)
McCarthy Blvd E-5 to E-2	7	7	10.0	0.149	2.09	10.0	21	4.2	1.8	0.0058	10	450	2.40	36.3	27.07	35.2	1.1
E-2 to E-1	6	13	11.8	0.136	1.90	16.1	24	5.1	1.5	0.0058	15	280	1.88	33.9	24.30	33.3	0.6
E-1 to B-7	4	17	13.3	0.130	1.82	20.2	24	6.4	0.6	0.0058	15	220	2.34	32.0	22.70	34.1	-2.1
Barber Lane C-4 to C-2	2	2	10.0	0.149	2.09	2.8	15	2.3	2.0	0.0019	2	280	0.72	32.8	28.03	33.9	-1.1
C-2 to B-9	12	14	12.0	0.136	1.90	16.8	30	3.4	1.7	0.0016	14	360	0.81	32.0	28.71	32.3	-0.3
B-9 to B-7	6	19	13.8	0.126	1.76	21.9	30	4.5	1.6	0.0024	17	420	1.59	31.2	28.14	33.2	-2.0
McCarthy Blvd B-7 to B-4	2	38	15.3	0.121	1.69	41.8	36	5.9	1.0	0.0028	31	370	1.93	29.6	22.48	34.8	-5.2
B-4 to B-1	7	45	16.4	0.117	1.64	48.0	42	5.0	1.4	0.0017	36	430	1.30	27.7	21.89	33.5	-5.8
B-1 to D-8	10	55	17.8	0.111	1.55	55.5	42	5.8	0.8	0.0022	41	270	1.09	26.4	21.16	32	-5.6
Barber Lane C-5 to F-8	6	6	10.0	0.149	2.09	7.6	15	6.2	1.3	0.0027	3	470	8.63	40.2	28.02	33	7.2
F-8 to F-5	3	9	11.3	0.142	1.99	11.4	21	4.7	1.7	0.0051	10	480	3.29	33.3	25.97	31.6	1.7
C-4 to F-5	5	5	10.0	0.149	2.09	7.1	21	2.9	2.8	0.0015	5	500	1.32	31.3	24.85	28.9	2.4
Cottonwood Dr F-5 to F-2	1	15	13.0	0.130	1.82	18.0	27	4.5	1.0	0.0020	12	280	1.25	32.5	24.35	30	2.5
F-2 to F-1	7	23	14.0	0.126	1.76	25.9	33	4.4	1.3	0.0016	18	350	1.12	31.3	24.47	29	2.3
F-1 to E-7	7	30	15.3	0.121	1.69	32.7	33	5.5	0.7	0.0024	22	230	1.17	30.2	23.91	30.5	-0.3
Buckeye Dr B-9 to E-7	8	8	10.0	0.149	2.09	11.3	24	3.6	3.1	0.0025	10	660	2.17	31.2	24.28	27.6	3.6
Cottonwood Dr E-7 to E-4	1	39	16.0	0.117	1.64	41.9	36	5.9	0.9	0.0026	30	330	1.73	29.0	23.65	30.7	-1.7
E-4 to E-1	7	46	17.0	0.114	1.60	47.6	42	4.9	0.8	0.0018	37	230	0.68	27.3	22.65	29.2	-1.9
E-1 to D-8	6	52	17.7	0.111	1.55	52.0	42	5.4	1.1	0.0020	39	350	1.24	26.6	22.74	29	-2.4
McCarthy Blvd D-8 to D-5	0	106	18.8	0.108	1.51	104.6	54	6.6	0.4	0.0019	74	170	0.64	25.3	21.56	30.8	-5.5
D-5 to D-4	1	108	19.2	0.108	1.51	105.7	54	6.6	0.9	0.0019	74	370	1.42	24.7	21.26	30.4	-5.7
D-4 to D-1	6	114	20.2	0.105	1.47	108.5	54	6.8	0.8	0.0022	80	320	1.30	23.3	20.57	30.6	-7.3
D-1 to A-14	3	117	20.9	0.102	1.43	108.6	54	6.8	0.9	0.0022	80	385	1.56	22.0	19.91	29.7	-7.7
A-14 to C-4	7	124	21.9	0.100	1.40	112.6	54	7.1	0.7	0.0028	90	280	1.22	20.4	18.96	28.2	-7.8
C-4 to J Structure	8	132	22.5	0.099	1.39	118.5	54	7.4	0.6	0.0030	94	250	1.21	19.2	18.2	27.3	-8.1
Barber Lane C-1 to F-1	6	6	10.0	0.149	2.09	8.0	21	3.3	3.9	0.0017	6	780	2.64	27.5	22.08	27.4	0.1
C-8 to F-1	5	5	10.0	0.149	2.09	6.8	15	5.5	1.4	0.0024	3	470	6.88	31.8	21.75	24.7	7.1
Sycamore Drive F-1 to E-7	1	12	13.9	0.126	1.76	13.6	27	3.4	2.3	0.0020	12	480	1.24	27.1	21.28	24.9	2.2
E-7 to E-5	11	23	16.2	0.117	1.64	24.3	30	4.9	1.2	0.0022	17	360	1.68	25.8	20.58	26.8	-1.0
E-5 to E-1	9	32	17.5	0.113	1.58	32.9	33	5.5	1.3	0.0025	23	440	2.26	24.2	20.19	29	-4.8
Buckeye Drive B-6 to E-2	6	6	10.0	0.149	2.09	8.1	24	2.6	3.5	0.0027	10	550					
E-2 to E-1	2	8	13.5	0.128	1.79	9.4	24	3.0	0.3	0.0020	9	60	0.14	22.0	22.18		
Sycamore Drive E-1 to D-1	5	45	18.8	0.108	1.51	44.1	42	4.6	1.1	0.0020	39	310	0.79	21.9	18.89	27.8	-5.9
D-1 to A-9	15	60	19.9	0.105	1.47	57.0	42	5.9	0.6	0.0027	45	220	0.94	21.1	18.23	24.8	-3.7
A-9 to A-7	2	62	20.5	0.104	1.45	58.1	42	6.0	0.7	0.0027	45	270	1.20	20.2	17.52	25.5	-5.3
A-7 to A-2	7	69	21.3	0.102	1.43	64.0	54	4.0	0.4	0.0027	89	90	0.13	19.0	17.82	24.3	-5.3
Buckeye Ct B-4 to A-13	1	1	10.0	0.149	2.09	1.1	12	1.4	4.2	0.0035	2	350					
A-13 to A-12	6	7	14.2	0.126	1.76	7.5	27	1.9	3.7	0.0018	11	420					
A-12 to A-5	2	9	18.0	0.111	1.55	8.8	27	2.2	2.2	0.0028	14	290					
A-5 to A-2	2	11	20.1	0.105	1.47	10.4	33	1.8	4.3	0.0017	19	450	0.23	19.1	19.74		
Sycamore Dr A-2 to A-1	0	80	24.4	0.094	1.32	68.3	54	4.3	1.0	0.0021	78	250	0.40	18.9	17.67	24.3	-5.4
A-1 to J Structure	0	80	25.4	0.093	1.30	67.6	54	4.3	1.2	0.0021	78	300	0.47	18.5	17.11	25.3	-6.8
Tasman Dr A-4 to A-1	11	11	10.0	0.149	2.09	14.4	30	2.9	1.9	0.0013	13	330	0.54	22.6	22.29	25.9	-3.3
A-1 to C-11	9	20	11.9	0.136	1.90	24.4	36	3.4	1.8	0.0013	21	380	0.67	22.0	21.87	24.7	-2.7
C-11 to F-1	8	27	13.7	0.126	1.76	31.2	39	3.8	1.8	0.0013	26	400	0.76	21.3	21.34	23.2	-1.9
McCarthy Blvd C-8 to F-1	5	5	15.0	0.121	1.69	5.8	30	1.2	6.7	0.0017	15	480			20.9	22.9	-2.0
F-1 to F-4	6	38	21.7	0.100	1.40	34.6	45	3.1	2.2	0.0019	46	420			20.82	25	-4.2
F-4 to F-7	6	44	24.0	0.095	1.33	38.0	48	3.0	2.0	0.0017	51	360			19.98	23.5	-3.5
F-7 to J Structure	27	71	26.0	0.092	1.29	59.1	54	3.7	3.0	0.0020	76	670	0.80	18.8	19.36	24.7	-5.9
J Structure to Pump Station	0	282	29.0	0.087	1.22	223.3	84	5.8	1.2	0.0019	242	420	0.68	18.0	17	27.1	-9.1
Pump Station														17.3			

Hydrologic and Hydraulic Parameters

Mean Annual Precipitation = 14 Inches C = 0.65 n = 0.015

JOB SCVW-05-95
SHEET NO. 1 OF 6
CALCULATED BY CDA DATE 6-01-95
CHECKED BY DATE
SCALE

Capacity of Pump Stations

Examine pump station capacity with:

1) Coyote Creek at 100-year stage
2) Pump stations operating at levels set by City of Milpitas

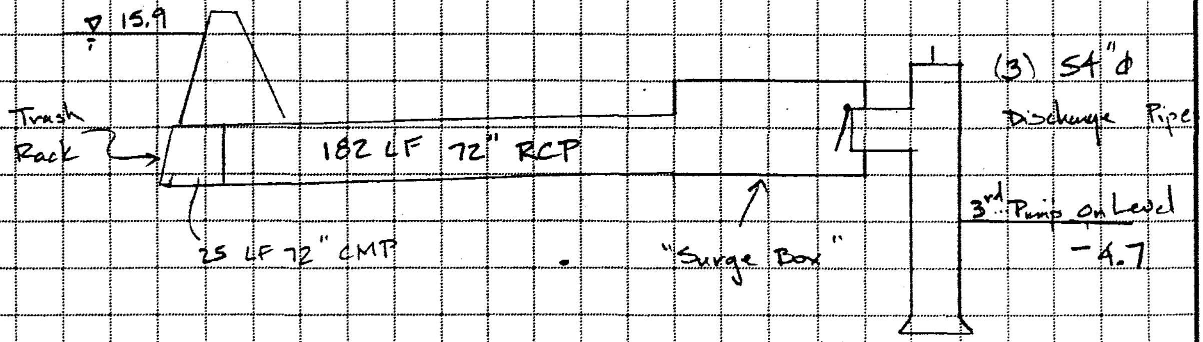
Coyote Creek Stage:

Q_{100} = 14,500 cfs (SCVWD Design Flow)

From SCVWD deck, WSEL at:

McCarthy Ranch	Sta 14500.	15.9	NGVD
Bellew	GDM Sta 61600.	30.0	
Murphy Ranch	GDM Sta 63600.	31.3	
Oak Creek	GDM Sta 67800.	35.6	

1. McCarthy Ranch Pump Station



Schaaf & Wheeler
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JOB SCVW - 05 - 95
SHEET NO. 2 OF 6
CALCULATED BY ODA DATE 6-01-95
CHECKED BY DATE
SCALE

Static Lift = 15.9 − (−4.7) = 20.6

Loss per Pump : 20' 54" STL Pipe
Elbow
Flap Gate
Exit Loss to Sump Pit

Loss per 3 Pumps : Entrance Loss to Outfall
182 LF 72" RCP + 25 LF 72" CMP
Exit Loss to Coyote Creek incl. trash rack

Friction Loss $h = 2.87 n^2 \frac{l V^2}{d^{4/3}}$

STL Pipe $n = .013$ $h = 2.87(.013)^2 \frac{(20)}{(4.5)^{4/3}} V^2$

$= .00131 V^2$

RCP $n = .018$ $h = 2.87(.018)^2 \frac{(182)}{(6)^{4/3}} V^2$

CMP $n = .025$

$= .0196 V^2$

Elbow $h = .8 V^2/2g = .01242 V^2$

Flap Gate $h = .1 V^2/2g = .00155 V^2$

Exit Loss $h = V^2/2g = .0155 V^2$
Trash Rack $.5 V^2/2g$ $.00776 V^2$

Entrance Loss $h = .5 V^2/2g = .00776 V^2$

$h_{pump} = .03078 V_p^2$
$h_{OUT} = .0506 V_o^2$

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JOB SCVW-05-95
SHEET NO. 3 OF 6
CALCULATED BY CDA DATE 6-01-95
CHECKED BY DATE
SCALE

System Curve

Inflow (cfs)	Q_{pump} (gpm)	V_{pump}	h_{pump}	V_{out}	h_{out}	TDH
0	0	0	0	0	0	20.6
50	7,480	1.05	.03	1.77	0.2	20.8
100	14,960	2.1	.1	3.54	0.6	21.3
150	22,440	3.1	.3	5.31	1.4	22.3
200	29,920	4.2	.5	7.07	2.5	23.6
250	37,400	5.2	.9	8.84	4.0	25.5
300	44,880	6.3	1.2	10.61	5.7	27.5
350	52,360	7.3	1.7	12.38	7.8	30.1
400	59,840	8.3	2.2	14.15	10.1	32.9

From curve Pump Discharge = 56,600 gpm

So station capacity = 378 cfs > Q_{100} = 260 cfs OK

[2 of 3 pumps would run in 100-year event]

2. Bellew Pump Station

(3) 54" ϕ Pump Discharge to 75 LF 78" RCP +
(No Trash Rack) 20 LF 78" CMP

3^{rd} Pump on Level = 9.46
Coyote Tailwater = 30.00

Static Lift = 30 - 9.46 = 20.5

Pump $h = .03078 V^2$
Outfall $h = \left\{ \frac{2.87}{(6.5)^{4/3}} \left[(.013)^2(75) + (.025)^2(20) \right] + .0076 + .0155 \right\} V^2$
$= .0320 V^2$

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JOB SCVWD - 05 - 95
SHEET NO. 4 OF 6
CALCULATED BY CDA DATE 6-01-95
CHECKED BY DATE
SCALE

System Curve

Inflow (cfs)	Qpump (gpm)	V_{pump}	h_{pump}	V_{out}	h_{out}	TDH
200	29,920	4.2	.5	6.0	1.16	22.2
250	37,400	5.2	.9	7.5	1.82	23.2
300	44,880	6.3	1.2	9.0	2.62	24.3
350	52,360	7.3	1.7	10.6	3.56	25.8
400	59,840	8.3	2.2	12.1	4.65	27.4

From Curve Pump Discharge =

So Station Capacity = 380 cfs > Q_{100} = 190 cfs

3. Murphy Ranch Pump Station

(3) 54" Φ Pump Discharge to 125 LF 54" RCP & 60 LF 54" CMP
(No Trash Rack)

3rd Pump On Level = 14.15
Coyote Tailwater = 31.3

Static Lift = 31.3 − 14.15 = 17.2

Pump h = .03078 V^2 (same as others)

$$\text{Outfall } h = \left\{ \frac{2.87}{(4.5)^{4/3}} \left[(.018)^2 (125) + (.025)^2 (60) \right] + .00776 + .0155 \right\} V^2$$

$$= .0534 V^2$$

JOB SCVWD-05-95
SHEET NO. 5 OF 6
CALCULATED BY CDA DATE 6-01-95
CHECKED BY DATE
SCALE

System Curve

Inflow (cfs)	Qpump (gpm)	V_{pump}	h_{pump}	V_{OUT}	h_{OUT}	TDH
200	29,920	4.2	.5	12.6	8.4	26.1
250	37,400	5.2	.9	15.7	13.2	31.3
300	44,880	6.3	1.2	18.9	19.0	37.4
350	52,360	7.3	1.7	22.0	25.9	44.8
400	59,840	8.3	2.2	25.2	33.8	53.2

From Curve Pump Discharge = 30,250 gpm

Station Capacity = 3×30,250 gpm = 202 cfs $> Q_{100} = 120$ cf

4. Oak Creek Pump Station

(3) 54" Φ Pump Discharge to 288' 66" cast. pipe to 40' 84" CMP
(trashrack & manhole transition)

3rd Pump On Level = 17.25
Coyote Tailwater = 35.6
Static Lift = 35.6 - 17.3 = 18.3 Feet

Pump $h = .03078\,V^2$ (same as others)

$$\text{Outfall } h = \left\{ 2.87\left[\frac{(.018)^2(288)}{(5.5)^{4/3}}\right] + \underset{\uparrow \atop \text{entrance}}{.00776} + \underset{\uparrow \atop \text{transition}}{.1/2(32.2)} \right\} V_{66''}^2$$

$$+ \left\{ 2.87\left[\frac{(.025)^2(40)}{(7)^{4/3}}\right] + \underset{\uparrow \atop \text{trash rack}}{.00776} + \underset{\uparrow \atop \text{exit}}{.0155} \right\} V_{84''}^2$$

$$= .0369\,V_{66''}^2 + .0284\,V_{84}^2$$

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JOB SCVW-05.95
SHEET NO. 6 OF 6
CALCULATED BY CDA DATE 6-01-95
CHECKED BY DATE
SCALE

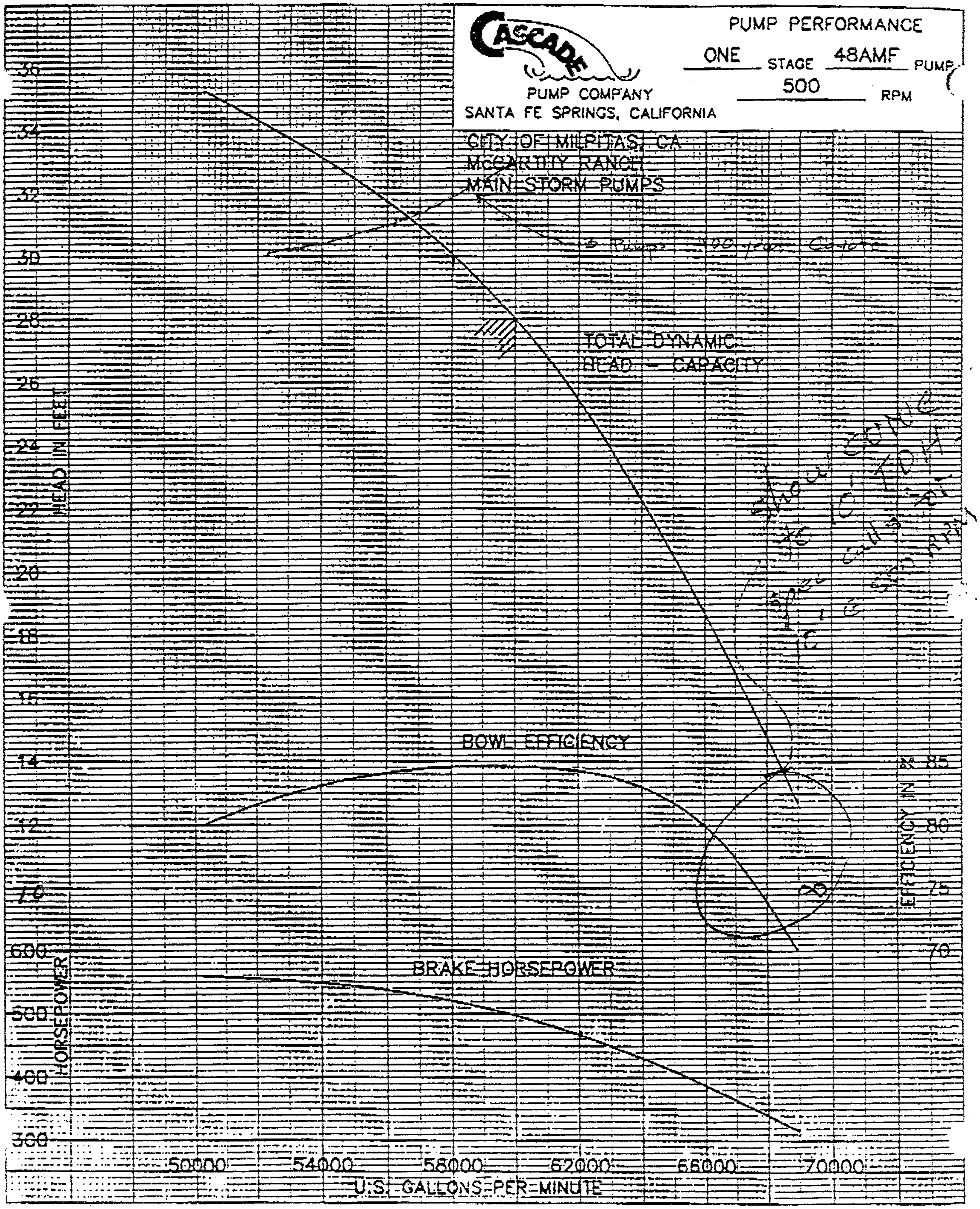
System Curve

Inflow (cfs)	Qpump (gpm)	V_{pump}	h_{pump}	$V_{66"}$	$V_{84"}$	h_{ex}	TDH
200	29,920	4.2	.5	8.4	5.2	3.4	22.2
250	37,400	5.2	.9	10.5	6.5	5.3	24.5
300	44,880	6.3	1.2	12.6	7.8	7.6	27.1
350	52,360	7.3	1.7	14.7	9.1	10.4	30.4
400	59,840	8.3	2.2	16.8	10.4	13.6	34.1

From Curve Pump Discharge = 48,000 gpm

Station Capacity (x 3) = 320 cfs > Q_{100} = 260 cfs

CURVE NO. 14452/54

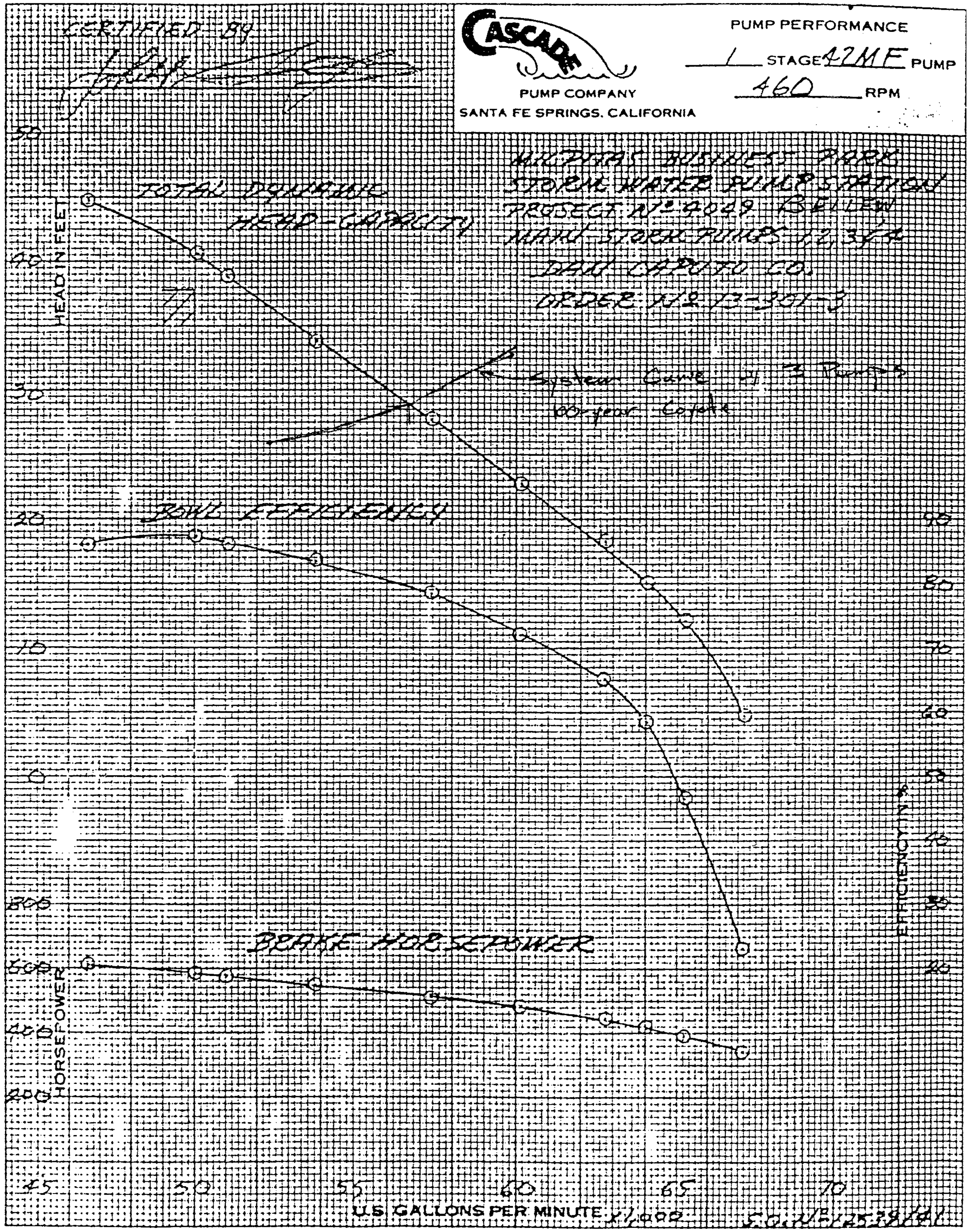


CURVES SHOW APPROXIMATELY THE CHARACTERISTICS WHEN PUMPING CLEAR NON-AERATED WATER. NO GUARANTEE IS MADE EXCEPT FOR THE RATED POINT.

CURVE NO. 2058-1

CASCADE PUMP COMPANY
SANTA FE SPRINGS, CALIFORNIA

PUMP PERFORMANCE
1 STAGE 42MF PUMP
460 RPM

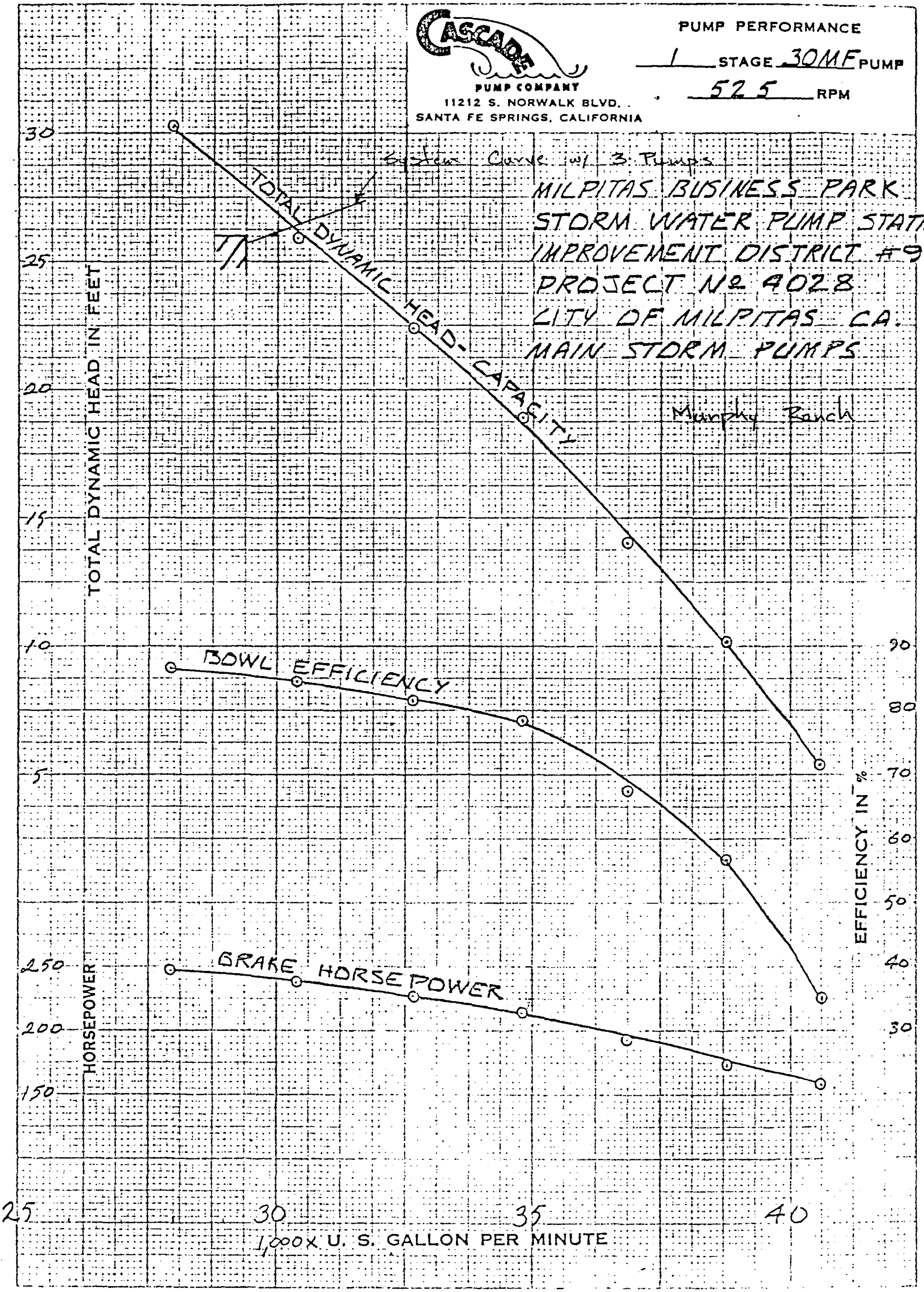


MILPITAS BUSINESS PARK
STORM WATER PUMP STATION
PROJECT No 9049 BELLEW
MAIN STORM PUMPS 1,2,3 & 4
DAN CAPUTO CO.
ORDER No 13-301-3

E061 9/84

CURVES SHOW APPROXIMATELY THE CHARACTERISTICS WHEN PUMPING CLEAR NON-AERATED WATER. NO GUARANTEE IS MADE EXCEPT FOR THE RATED POINT.

CURVE NO. 1793

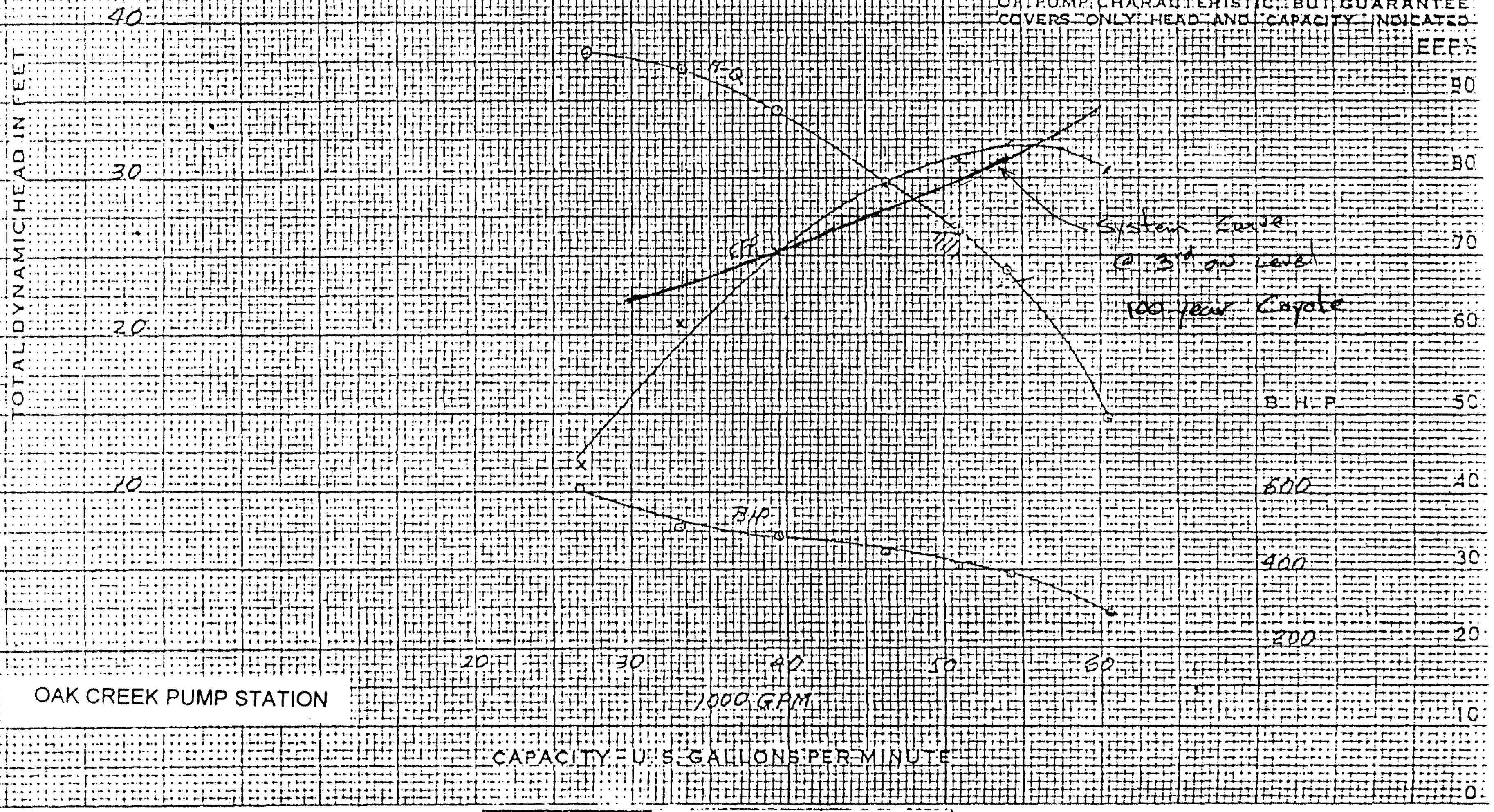


E061

K.S. Fang	8-4-1979	K.M. TRAINER ENG. INC.
BY	DATE	CUSTOMER

PUMP NO. 869-70424
SIZE 36 TYPE P
R.P.M. 590 STAGE 1
SPECIFIC GRAVITY 1.0
IMPELLER NO. 17A-36P
IMPELLER DIA. 34.950
PLOTTED BY KSF
DATE Aug. 4, 1979
REF. CURVE NO.

THIS CURVE SHOWS THE GENERAL SHAPE OF PUMP CHARACTERISTIC BUT GUARANTEE COVERS ONLY HEAD AND CAPACITY INDICATED



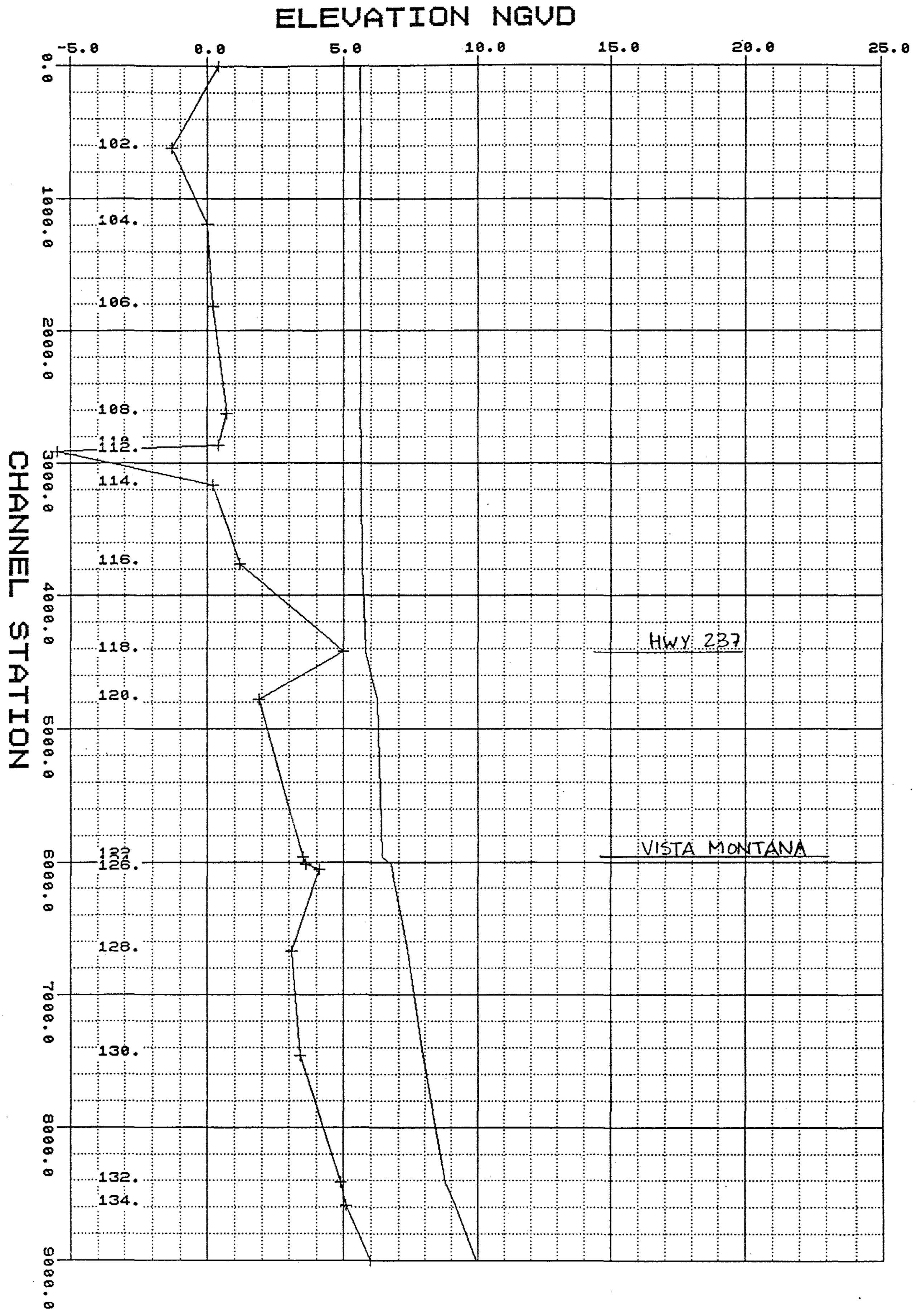
OAK CREEK PUMP STATION

A-40041 K&E

AURORA PUMP

SHEET NO.

50' BLOCKAGE CONDITIONS,



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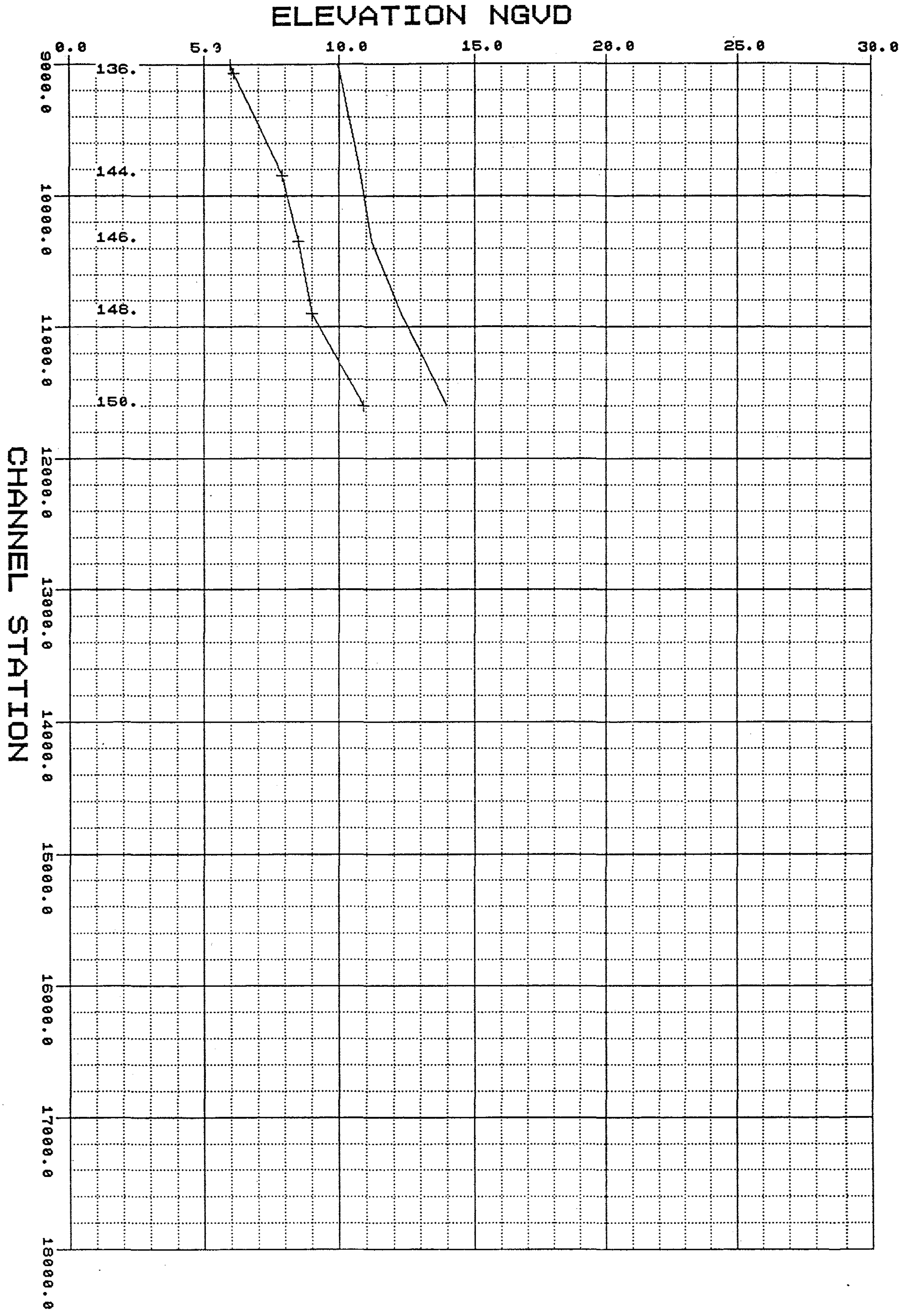
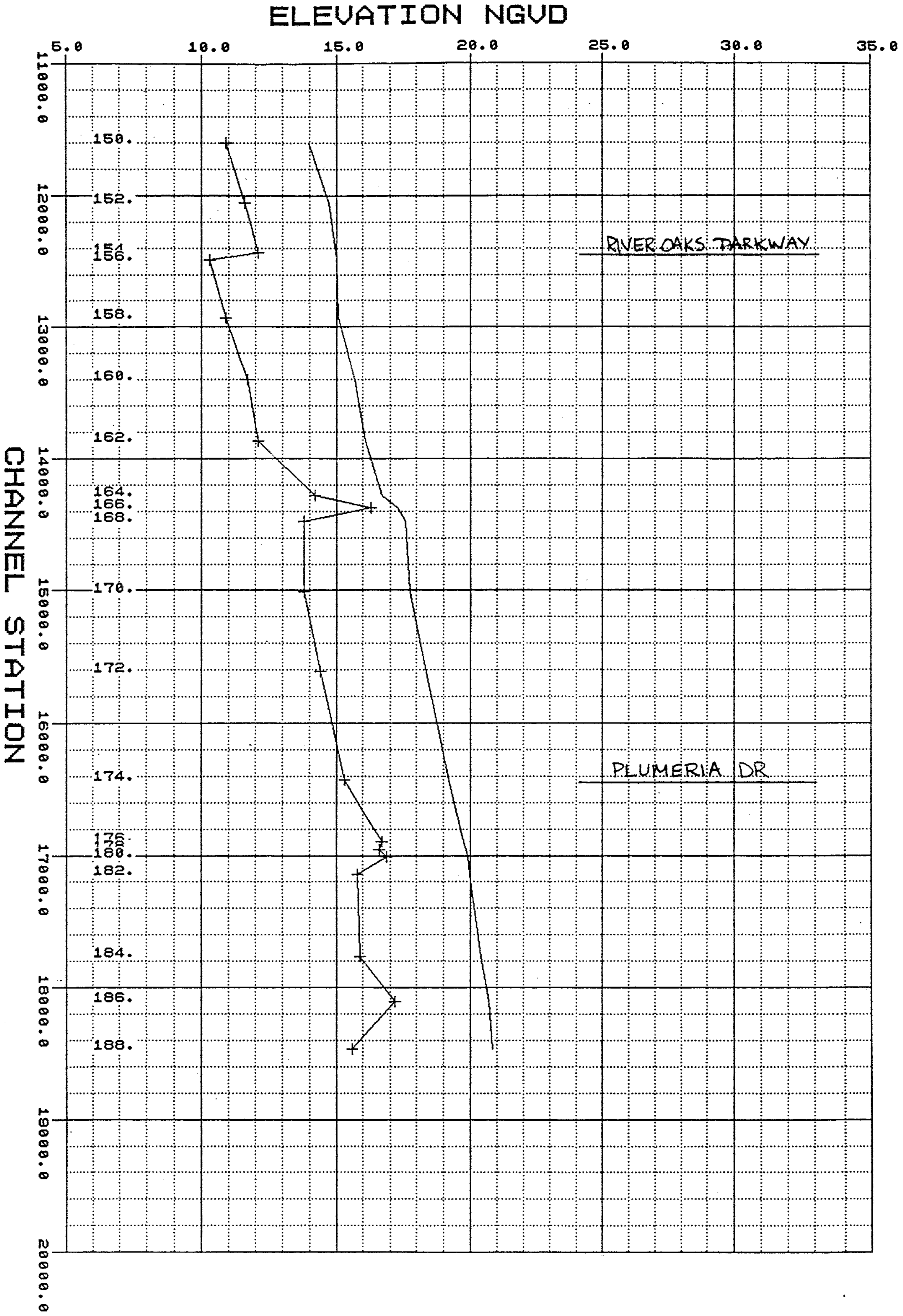
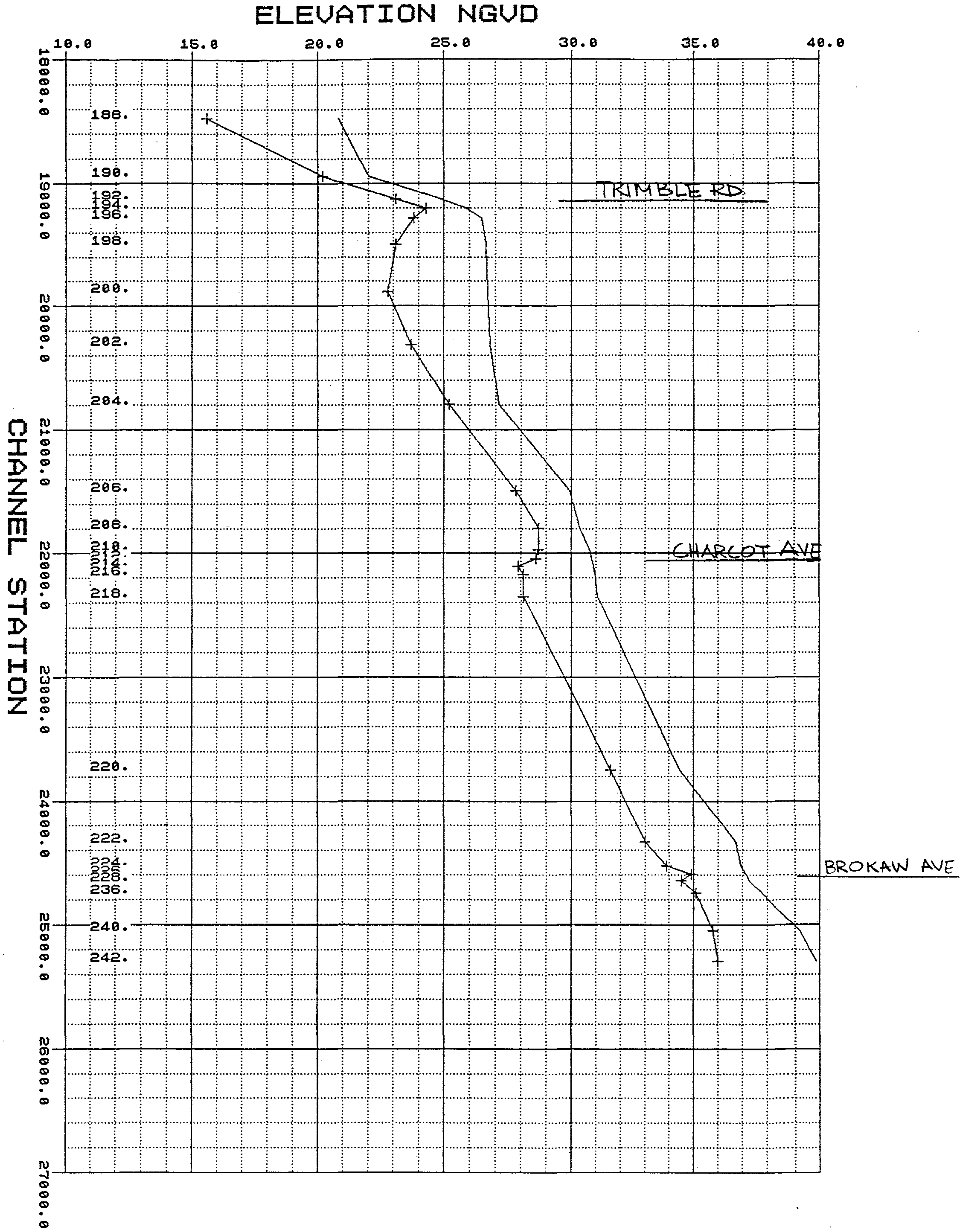




50% BLOCKED CONDITIONS 1

50% BLOCKED CONDITIONS -



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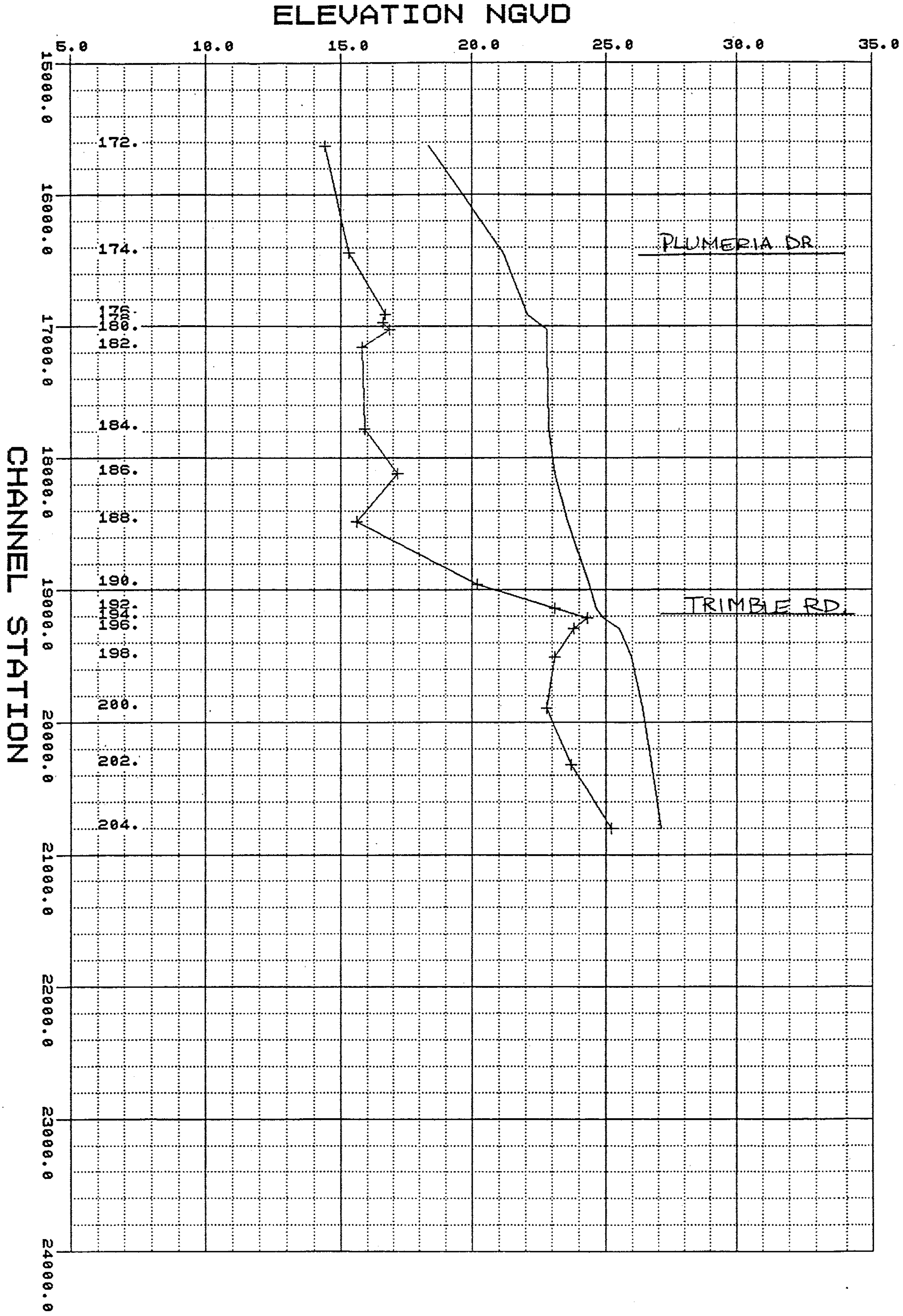

Sta. Tables

COYOTE CREEK STATIONING REFERENCE TABLE
REACH 1

HEC-2 FILE	AS-BUILT WEST LEVEE STA.	AS-BUILT EAST LEVEE STA.	DESIGN HYDRAULIC STA.	FEMA YELLOW BOOK STA.
BEGIN BYPASS CHANNEL REACH 1A Q=12,400 IN BYPASS				
COY-A			0+00	N/A
"			20+00	"
"			40+00	"
"			60+00	"
"			80+00	"
"			100+00	"
"			140+00	"
"			160+00	"
"			180+00	"
"			200+00	"
"			210+00	"
"			220+00	"
"			221+60	"
"			221+80	"
"			224+00	"
"			233+00	"
"			243+00	"
"			253+00	"
"			262+00	"
"			267+50	"
"			273+00	"
BEGIN BYPASS CHANNEL REACH 1A Q=12,400 IN BYPASS				
COY-1A			0+00	"
"			5+00	"
"			10+00	"
"			15+00	"
"			20+00	"
"	**BEGIN LEVEE LOWERING #1**			
"			26+90	"
"			27+50	"
"			27+51	"
"			27+90	"
"			30+00	"
"			33+00	"
"			33+01	"
"			36+50	"
"			40+00	"
"			50+00	"
COY-1B			51+50	"
"			51+51	"
"			52+49	"
BEGIN LEVEE LOWERING #3				
"			52+50	"
"			53+35	"
"			54+20	"

COYOTE CREEK STATIONING REFERENCE TABLE
REACH 1

HEC-2 FILE	AS-BUILT WEST LEVEE STA.	AS-BUILT EAST LEVEE STA.	DESIGN HYDRAULIC STA.	FEMA YELLOW BOOK STA.
		BEGIN ISLAND #2		
COY-1B			54+21	N/A
"			55+00	"
		END ISLAND #2		
"			55+01	"
"			55+70	"
"			55+80	"
"			56+79	"
"			56+80	"
"			57+50	"
"			57+51	"
"			58+20	"
"			58+30	"
"			59+30	"
"			59+31	"
"			59+80	"
"			60+50	"
"			60+70	"
"			60+80	"
"			65+00	"
"			67+40	"
"			67+50	"
"			68+10	"
"			68+99	"
"			69+00	"
"			69+11	"
		D/S TOP HINGE PT. OF ELEV. 7' TIDE WEIR		
"			69+56	"
"			69+82	"
"			70+00	"
"			73+50	"
"			73+65	"
"			73+90	"
"			74+05	"
"			75+70	"
"			76+40	"
"			76+80	"
"			77+40	"
"			78+00	"
"			79+50	"
"			80+00	"
"			80+05	"
"			83+00	"
"			85+50	"
"			88+00	"
"			90+00	"
"			90+01	"
"			96+15	"

COYOTE CREEK STATIONING REFERENCE TABLE
REACH 1

HEC-2 FILE	AS-BUILT WEST LEVEE STA.	AS-BUILT EAST LEVEE STA.	DESIGN HYDRAULIC STA.	FEMA YELLOW BOOK STA.
COY-1B			96+45	N/A
"			97+14	"
"			97+40	"
"			97+60	"
"			97+65	"
"			99+80	"
"			100+20	"
"			101+60	"
"			102+00	"
"			104+25	"
P/S TOP HINGE PT. OF ELEV. 7' HAUL ROAD				
"			104+50	"
"			104+75	"
"			104+90	"
"			105+30	"
"			105+45	"
"			105+75	"
"			105+80	"
"			107+50	"
"			109+60	"
"			110+00	"
"			110+30	"
"			111+25	"
"			113+05	"
"			113+90	"
"			114+65	"
"			115+65	"
"			116+65	"
"			119+40	"
"			120+85	"
"			121+70	"
"			121+90	500+00

COYOTE CREEK STATIONING REFERENCE TABLE
REACH 2

HEC-2 FILE	AS-BUILT WEST LEVEE STA.	AS-BUILT EAST LEVEE STA.	DESIGN HYDRAULIC STA.	FEMA YELLOW BOOK STA.
BEGIN REACH 2A OLD STANDISH DAM REMOVED				
COY-2A			121+90	500+00
"	W - 9+40	E - 10+00	122+10	503+00
"			122+35	503+25
"			122+55	503+45
"			122+75	503+65
"			124+00	503+90
"			124+05	
"			125+00	504+90
"	W - 13+00	E - 13+75	127+50	507+40
"			130+00	
BEGIN CROSSOVER #1				
"	W - 16+40	E - 15+50	131+00	510+00
"			132+00	511+00
"			133+00	512+00
END CROSSOVER #1				
"	W - 18+00	E - 19+50	134+00	513+00
"			135+00	514+00
"	W - 23+50	E - 26+00	140+00	519+00
"			145+00	
"			150+00	
BEGIN CROSSOVER #2				
"	W - 38+00	E - 38+00	153+00	532+00
"			154+00	533+00
END CROSSOVER #2				
"	W - 41+50	E - 39+00	155+00	534+00
			156+00	535+00
"	W - 42+00	E - 40+00	157+00	536+00
END REACH 2A EAST LEVEE				
"		E - 41+35	158+00	537+00
BEGIN REACH 2B EAST LEVEE				
"		E - 42+50	160+00	539+00
"		E - 47+00	165+00	544+00
"			170+00	
END REACH 2A WEST LEVEE - MCCARTHY RANCH HOUSE				
"	W - 66+80		181+00	561+00
END REVEGETATION AREA - BEGIN REACH 2B WEST LEVEE				
"	W - 68+80	E - 68+40	183+00	563+00
"	W - 69+90	E - 69+50	184+00	564+00
"	W - 70+90	E - 70+00	185+00	565+00
350' U/S CILKER PROPERTY				
"	W - 75+00	E - 73+50	190+00	569+00
COY-2B	W - 77+00	E - 75+50	192+00	571+00
CONTINUE PHASE 2B - BEGIN CROSSOVER				
COY-2B	W - 81+00	E - 78+05	195+00	574+00

COYOTE CREEK STATIONING REFERENCE TABLE
REACH 2

HEC-2 FILE	AS-BUILT WEST LEVEE STA.	AS-BUILT EAST LEVEE STA.	DESIGN HYDRAULIC STA.	FEMA YELLOW BOOK STA.
END CROSSOVER				
COY-2B	W - 85+00	E - 82+05	199+00	578+00
"	W - 97+30	E - 98+00	211+30	590+30
D/S OLD BRIDGE				
COY-2B	W - 99+20	E - 101+00	216+00	593+00
"				595+00
U/S OLD BRIDGE				
COY-2B				595+50

COYOTE CREEK STATIONING REFERENCE TABLE
REACH 3

HEC-2 FILE	AS-BUILT WEST LEVEE STA.	AS-BUILT EAST LEVEE STA.	DESIGN HYDRAULIC STA.	FEMA YELLOW BOOK STA.
BEGIN PHASE 3B				
HWY 237				
COY-3A	569+10	569+10	569+10	596+50
"	571+40	571+40	571+40	597+40
END PHASE 3B - BEGIN PHASE 3A				
COY-3A	W - 10+83	E - 10+22	576+00	603+00
"	W - 13+00	E - 12+50	578+00	605+00
"			579+00	606+00
"			580+00	607+00
"	W - 16+00	E - 15+00	582+00	609+00
"			582+89	609+89
"			584+00	611+00
"	W - 19+00	E - 18+00	584+68	614+51
"			587+13	616+26
"	W - 26+80	E - 21+00	589+10	617+59
"	W - 29+50	E - 22+50	591+58	620+12
"			592+25	622+93
"			593+00	625+00
"	W - 34+00		594+00	626+00
BEGIN BYPASS				
COY-3BP, COY-3CH	W - 35+00	E - 27+00	596+00	628+00
"	W - 36+00		598+00	629+00
"	W - 37+00		599+81	630+00
"	W - 38+00	E - 29+00	600+00	630+10
"	W - 41+00		602+00	632+00
"	W - 43+00	E - 34+20	604+00	634+00
"	W - 45+00		606+00	636+00
"	W - 47+00	E - 37+50	608+00	638+00
"	W - 51+00		610+00	640+00
"	W - 51+50	E - 40+50	611+00	642+00
"	W - 52+60		614+00	643+00
"			616+00	647+00
"	W - 56+00	E - 48+00	617+71	650+00
"	W - 57+00		619+00	651+00
"	W - 62+00		621+25	653+00
"	W - 62+80		622+00	654+00
"	W - 63+00	E - 54+00	624+00	656+00
"	W - 65+00		626+00	659+00
"	W - 66+50		628+00	661+00
"	W - 69+00		632+00	667+00
END PHASE 3A				
BEGIN PHASE 3B				
COY-3BP, COY-3CH	W - 70+50		634+00	669+00
"	W - 73+50	E - 73+00	636+00	673+00
"	W - 76+00		638+00	675+00
"	W - 78+00		640+00	677+00
"	W - 80+30	E - 75+30	641+30	678+50

COYOTE CREEK STATIONING REFERENCE TABLE
REACH 3

HEC-2 FILE	AS-BUILT WEST LEVEE STA.	AS-BUILT EAST LEVEE STA.	DESIGN HYDRAULIC STA.	FEMA YELLOW BOOK STA.
COY-3BP, COY-3CH	W - 82+00		643+50	680+00
"	W - 84+00		644+56	681+00
"	W - 86+00		646+00	684+00
"	W - 89+00	E - 82+00	648+00	687+00
"	W - 91+80		650+00	690+00
"	W - 94+50		652+00	694+00
"	W - 97+25		654+00	696+00
"	W - 99+30		656+00	698+00
"	W - 101+00	E - 90+00	658+00	699+00
"	W - 102+00		659+18	700+00
"	W - 103+00		660+00	701+00
"	W - 105+00	E - 95+00	662+00	702+00
"	W - 106+00		664+00	704+00
"	W - 108+00		666+00	706+00
"	W - 109+25		668+00	708+00
"	W - 111+00	E - 105+00	670+00	710+00
"			670+22	710+50
"	W - 113+00	E - 107+00	672+00	712+00
"			672+37	712+50
"	W - 116+00		674+00	714+00
"	W - 118+00		676+00	716+00
"	W - 119+00	E - 111+00	676+72	717+00
"			676+85	717+20
"	W - 120+00		678+00	719+00
"	W - 121+50	E - 114+00	680+00	720+00
"	W - 123+00		682+00	722+00
"	W - 125+00		684+00	725+00
COY-3E	W - 127+00	E - 120+50	686+00	727+00
END BYPASS				
"	W - 129+00		688+00	730+00
"	W - 131+00	E - 125+50	690+00	732+00
"			692+00	734+50
"			693+00	735+50
"			694+30	737+00
END PHASE 3B				
"			696+00	739+00
"			698+00	740+00

EFFECTIVE FIS

COY2.

EXISTING FIS MODEL

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   17JUL95      10:12:08




 ************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 ************************************


T1      GEORGE S. NOLTE AND ASSOCIATES                                  300-76
T2      FIS-CAPACITY - P. JORGENSEN  STA 455+00 - 788+00 1% FLOWS
T3      COYOTE CREEK (STP - HWY 17)      EDITED - 6/92 - SMW

J1   ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS      Q

                 4

J2   NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW

       1          0        -1         0         0         0        -1         0


J3   VARIABLE CODES FOR SUMMARY PRINTOUT

      38          1        24        23        26        43         3

J5   LPRNT     NUMSEC                        *******REQUESTED SECTION NUMBERS*******

     -10        -10

NC    .045      .045      .045
QT     4.       1200.     1200.     1200.     1200.
        RUN STATIONING + 520' EQUALS BASEMAP STATIONING X'S LF TO RT LOOKING DS
X1    45500.    7.        1000.     1109.
GR    6.8       1000.     6.        1050.     -3.2      1060.     -3.2
GR    6.        1109.     8.        1230.

QT      4.      1500.     1500.     1500.     1500.
X1    46500.    7.        1000.     1150.     1000.     1000.     1000.
GR    8.5       1000.     8.        1052.     4.        1059.     -3.
GR    8.        1118.     8.5       1150.

X1    47500.    6.        1000.     1135.     1000.     1000.     1000.
GR    9.2       1000.     8.        1062.     -2.       1072.     -2.
GR    9.6       1135.

QT       4.     1500.     1500.     1500.     1500.
        FOOTBRIDGE AND DAM AT MILPITAS TREATMENT PLANT
X1    48175.    5.        1000.     1071.     675.      675.      675.
GR    10.       1000.               1028.               1040.     10.
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   17JUL95       10:12:08


(     48250.    6.          1000.       1095.       75.         75.         75.
GR    10.       1000.       .7          1039.       .7          1071.       10.
GR    15.       1150.

X1    48500.    5.          1000.       1071.       250.        250.        250.
GR    10.       1000.       1.7         1033.       1.7         1055.       10.

X1    48750.    5.          1000.       1075.       250.        250.        250.
GR    10.1      1000.       2.8         1016.       1.8         1035.       2.8

QT        4.    2000.       2000.       2000.       2000.
            TOTAL Q AT THIS SECTION SHOULD BE 4000CFS FROM SHEET FLOW BY FREEWAY
            AND FLOW IN CHANNEL BUT DUE TO ERROR IN STRIP TOPO OF 3FT. FLOWRATE HAS
            BEEN ARBITRARILY CHOOSEN AND WATERSURFACE ELEVATION SET AT 10.5 FROM
            HAND CALCULATIONS
X1    49000.    9.          1000.       1096.       250.        250.        250.
GR    16.       860.        10.         880.        10.1        1000.       2.9
GR    2.9       1082.       10.         1096.       10.         1160.       14.

X1    49250.    10.         1000.       1079.       250.        250.        250.
GR    16.       850.        10.         870.        10.1        1000.       3.1
GR    3.1       1057.       10.         1071.       11.         1079.       10.

QT        4.    600.        600.        600.        600.
X1    49500.    6.          1000.       1087.       250.        250.        250.
      9.8       1000.       3.2         1014.       2.2         1040.       3.2
GR    11.       1087.

X1    49750.    6.          1000.       1079.       250.        250.        250.
GR    9.7       1000.       3.3         1010.       2.3         1039.       3.3
GR    11.       1079.

QT        4.    800.        800.        800.        800.
X1    50000.    7.          1000.       1073.       250.        250.        250.
GR    10.5      1000.       3.4         1010.       2.4         1043.       5.
GR    11.1      1073.       11.2        1085.

QT        4.    1000.       1000.       1000.       1000.
X1    50400.    6.          1000.       1191.       400.        400.         400.
GR    11.       1000.       3.7         1012.       2.7         1040.       3.7
GR    10.7      1275.

QT        4.    1100.       1100.       1100.       1100.
X1    50750.    7.          1000.       1083.       350.        350.        350.
GR    10.9      1000.       3.9         1013.       2.9         1035.       3.9
GR    12.8      1083.       12.9        1090.

QT        4.    1150.       1150.       1150.       1150.
X1    51000.    6.          1000.       1075.       250.        250.        250.
GR    10.8      1000.       4.          1007.       3.          1040.       4.
      13.       1075.
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        4.    1200.      1200.      1200.      1200.
X1  51250.    6.         1000.      1072.      250.       250.       250.
GR  11.       1000.      4.2        1013.      3.2        1040.      7.
GR  12.8      1072.

QT      4.    1200.      1200.      1200.      1200.
X1  51500.    7.         1000.      1070.      250.       250.       250.
GR  11.7      1000.      6.7        1005.      3.3        1044.      7.
GR  12.       1120.      11.7       1310.

X1  51750.    7.         1000.      1072.      250.       250.       250.
GR  11.7      990.       11.6       1000.      4.5        1009.      3.5
GR  12.       1072.      12.9       1080.

X1  52000.    6.         1000.      1068.      250.       250.       250.
GR  11.9      1000.      4.6        1009.      3.6        1035.      6.
GR  13.       1068.

X1  52250.    7.         1000.      1055.      250.       250.       250.
GR  12.       985.       11.9       1000.      4.7        1011.      3.7
GR  12.       1045.      13.2       1055.

QT      4.    1200.      1200.      1200.      1200.
X1  52500.    7.         1000.      1073.      250.       250.       250.
GR  12.5      1000.      12.        1011.      9.         1014.      3.9
    12.       1060.      13.4       1073.

QT      4.    1400.      1400.      1400.      1400.
X1  52750.    8.         1000.      1082.      250.       250.       250.
GR  12.       940.       12.        1000.      5.         1008.      4.
GR  12.       1054.      13.7       1082.      13.7       1095.

QT      4.    1800.      1800.      1800.      1800.
X1  53000.    7.         1000.      1095.      250.       250.       250.
GR  13.       1000.      12.        1008.      6.         1014.      4.2
GR  12.       1084.      13.9       1095.

QT      4.    2100.      2100.      2100.      2100.
X1  53250.    8.         1000.      1109.      250.       250.       250.
GR  13.       1000.      12.        1030.      5.3        1043.      4.3
GR  12.       1109.      14.        1118.      14.2       1136.

X1  53500.    7.         1000.      1079.      250.       250.       250.
GR  15.5      1000.      14.        1004.      12.        1012.      7.
GR  5.4       1060.      14.4       1079.

X1  53750.    9.         1000.      1103.      250.       250.       250.
GR  20.       1000.      20.1       1002.      18.        1008.      5.6
GR  5.6       1080.      12.        1088.      14.        1094.      14.3
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(     54000.    8.          1000.       1122.       250.        250.        250.
GR    16.       1000.       14.         1007.       12.         1018.       5.7
GR    5.7       1102.       16.         1114.       16.3        1122.

X1    54250.    10.         1000.       1117.       250.        250.        250.
GR    17.       1000.       16.         1005.       14.         1010.       12.
GR    4.8       1075.       5.8         1088.       12.         1092.       14.

X1    54500.    8.          1000.       1098.       250.        250.        250.
GR    17.5      1000.       16.         1003.       14.         1009.       12.
GR    5.        1072.       6.          1085.       16.         1098.

X1    54750.    10.         1000.       1115.       250.        250.        250.
GR    17.6      1000.       16.         1006.       14.         1010.       12.
GR    5.1       1058.       6.1         1090.       12.         1096.       14.

X1    55000.    10.         1000.       1124.       250.        250.        250.
GR    17.1      1000.       14.         1015.       12.         1018.       7.
GR    6.3       1098.       12.         1108.       14.         1111.       16.

X1    55250.    10.         1000.       1125.       250.        250.        250.
GR    17.7      1000.       16.         1002.       14.         1015.       12.
GR    5.4       1082.       8.          1108.       12.         1112.       14.

X1    55500.    11.         1000.       1123.       250.        250.        250.
      17.8      1000.       16.         1008.       14.         1015.       12.
GR    5.5       1071.       7.          1099.       12.         1104.       14.
GR    16.5      1123.

X1    55750.    10.         1000.       1109.       250.        250.        250.
GR    17.6      1000.       16.         1008.       14.         1012.       12.
GR    5.7       1028.       8.          1094.       12.         1098.       14.

QT        4.    2200.       2200.       2200.       2200.
          SPILL FROM STATION 56000 TO 57250 SPILLS EAST TO RUN ALONG HY 17 TO
          MILPITAS TREATMENT PLANT
X1    56000.    8.          1000.       1118.       250.        250.        250.
GR    17.3      1000.       16.         1005.       14.         1010.       8.
GR    8.        1097.       14.         1113.       15.         1118.

QT        4.    2500.       2500.       2500.       2500.
X1    56250.    7.          1000.       1108.       250.        250.        250.
GR    17.2      1000.       7.          1026.       6.          1058.       7.
GR    14.       1101.       15.4        1108.

QT        4.    2900.       2900.       2900.       2900.
X1    56500.    10.         1000.       1098.       250.        250.        250.
GR    17.5      1000.       16.         1005.       12.         1019.       7.1
GR    7.1       1078.       14.         1090.       15.3        1098.       15.1
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         4.    3400.      3400.      3400.        3400.
X1   56750.    10.        1000.      1097.        250.        250.        250.
GR   17.8      1000.      16.        1005.        7.3         1026.       6.3
GR   12.       1075.      14.        1079.        16.         1088.       16.2

QT       4.    3900.      3900.      3900.        3900.
X1   57000.    10.        1000.      1110.        250.        250.        250.
GR   18.6      1000.      18.        1005.        7.5         1025.       6.5
GR   12.       1089.      16.        1103.        16.8        1110.       16.1

QT       4.    4400.      4400.      4400.        4400.
X1   57250.    8.         1000.      1112.        250.        250.        250.
GR   19.       1000.      7.6        1025.        6.6         1039.       7.6
GR   14.       1094.      16.        1103.        17.         1112.

QT       4.    4450.      4450.      4450.        4450.
X1   57500.    6.         1000.      1090.        250.        250.        250.
GR   19.       1000.      7.7        1015.        6.7         1031.       7.7
GR   19.2      1090.

X1   57750.    11.        1000.      1091.        250.        250.        250.
GR   19.       1000.      18.        1007.        16.         1011.       14.
GR   8.        1022.      6.9        1025.        7.9         1062.       14.
GR   19.8      1091.

         4.    4500.      4500.      4500.        4500.
        SPILL FROM 58000 TO 58500 SPILLS WEST
X1   58000.    11.        1000.      1105.        250.        250.        250.
GR   19.       1000.      18.        1005.        12.         1013.       8.1
GR   8.1       1062.      12.        1070.        16.         1075.       18.
GR   21.       1105.

QT       4.    4600.      4600.      4600.        4600.
X1   58235.    7.         1000.      1105.        235.        235.        235.
GR   20.       1000.      12.        1009.        8.2         1015.       7.2
GR   12.       1063.      20.        1105.

QT       4.    5100.      5100.      5100.        5100.
X1   58500.    6.         1000.      1100.        265.        265.        265.
GR   19.       1000.      18.        1005.        8.3         1025.       7.3
GR   20.       1100.

QT       4.    5800.      5800.      5800.        5800.
X1   58830.    7.         1000.      1101.        330.        330.        330.
GR   20.5      1000.      10.        1028.        7.4         1049.       8.4
GR   22.       1101.      22.        1125.

X1   58960.    8.         1000.      1109.        130.        130.        130.
GR   22.       1000.      20.        1012.        8.5         1038.       7.5
GR   12.       1080.      16.        1100.        22.         1109.
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        OLD MILPITAS ALVISO RD. DOUBLE SPAN CONCRETE BRIDGE
X1    58990.    6.         1000.      1105.       30.         30.         30.
GR    24.6      1000.      7.6        1010.       7.6         1075.       14.
GR    25.       1105.

SB    1.25      1.5        2.6        100.        80.         2.5         1469.
X1    59010.                                      20.         20.         20.
X2                         1.         23.         25.5

X1    59035.    11.        1000.      1078.       25.         25.         25.
GR    24.6      970.       22.        1000.       16.         1004.       12.
GR    7.6       1040.      8.6        1050.       20.         1078.       22.
GR    28.1      1195.

QT        4.    5850.      5850.      5850.       5850.
X1    59140.    10.        1000.      1095.       105.        105.         105.
GR    21.       1000.      14.        1015.       8.6         1025.       7.6
GR    16.       1075.      18.        1091.       20.         1095.       28.

        LOCATION OF HY 237 BRIDGES NOT CODED DUE TO MINOR LOSS OF BRIDGES AS CAN
        BE SEEN ON OLD MILPITAS ALVISO RD
X1    59380.    11.        1000.      1117.       240.        240.        240.
GR    29.5      970.       28.        1000.       25.         1002.       20.
GR    7.9       1032.      8.9        1058.       10.5        1075.       15.
GR    29.       1117.

X1    59915.    11.        1000.      1115.       535.        535.        535.
GR    27.5      1000.      26.        1010.       24.         1015.       22.
GR    11.       1035.      8.2        1045.       9.2         1060.       20.
GR    26.       1115.

X1    60400.    12.        1000.      1115.       485.        485.        485.
GR    28.7      1000.      26.        1010.       24.         1020.       18.
GR    9.5       1045.      8.5        1065.       10.         1080.       20.
GR    24.       1100.      27.3       1115.

X1    60695.    13.        1000.      1130.       295.        295.        295.
GR    28.6      1000.      26.        1030.       22.         1035.       20.
GR    14.       1050.      9.8        1060.       8.8         1065.       9.8
GR    20.       1100.      22.        1105.       27.2        1130.

X1    61100.    10.        1000.      1150.       405.        405.        405.
GR    28.8      1000.      20.        1010.       10.1        1020.       9.1
GR    16.       1105.      20.        1115.       22.         1120.       26.

X1    61600.    16.        1000.      1160.       500.        500.        500.
GR    37.5      1000.      36.        1008.       28.         1020.       26.
GR    20.       1050.      18.        1054.       10.5        1065.       9.5
GR    16.       1115.      18.        1118.       22.         1120.       26.
GR    30.       1170.
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     62360.   13.       1000.     1120.      760.       760.       760.
GR   28.5     1000.     26.       1005.      20.        1025.      11.2
GR   11.2     1065.     16.       1075.      18.        1080.      20.
GR   24.      1100.     30.       1115.      31.5       1120.

QT       4.   5850.     5850.     5850.      5850.
        SPILL FROM 63020 TO 67020 SPILLS WEST.
X1   63020.   11.       1000.     1125.      660.       660.       660.
GR   28.5     1000.     24.       1015.      20.        1030.      18.
GR   11.9     1060.     10.9      1070.      11.9       1082.      20.
GR   31.      1125.

QT       4.   5900.     5900.     5900.      5900.
X1   63300.   12.       1000.     1145.      280.       280.       280.
GR   28.5     1000.     26.       1005.      20.        1019.      12.2
GR   12.2     1065.     20.       1090.      22.        1100.      24.
GR   28.      1125.     31.1      1145.

QT       4.   6000.     6000.     6000.      6000.
X1   63690.   9.        1000.     1130.      390.       390.       390.
GR   28.8     1000.     28.       1010.      20.        1025.      12.6
GR   12.6     1075.     20.       1085.      30.        1115.      33.5

QT       4.   6400.     6400.     6400.      6400.
X1   64060.   17.       1000.     1130.      370.       370.       370.
     28.5     1000.     26.       1010.      24.        1020.      22.
GR   18.      1032.     16.       1040.      13.        1045.      12.
GR   16.      1075.     18.       1085.      20.        1090.      30.
GR   34.      1120.     34.2      1130.

QT       4.   7400.     7400.     7400.      7400.
X1   64470.   12.       1000.     1175.      410.       410.       410.
GR   29.      1000.     24.       1035.      20.        1050.      13.5
GR   13.5     1109.     18.       1115.      20.        1120.      30.
GR   34.      1155.     35.5      1175.

QT       4.   7700.     7700.     7700.      7500.
X1   64570.   13.       1000.     1185.      100.       100.       100.
GR   29.6     1000.     24.       1011.      20.        1029.      13.8
GR   13.8     1065.     16.       1083.      18.        1095.      20.
GR   32.      1152.     34.       1160.      35.        1185.

QT       4.   7700.     7700.     7700.
X1   64880.   8.        1000.     1145.      310.       310.       310.
GR   32.5     1000.     30.       1010.      20.        1030.      13.2
GR   20.      1088.     30.       1125.      30.4       1145.

X1   65490.   12.       1000.     1130.      610.       610.       610.
GR   32.5     1000.     30.       1013.      20.        1030.      14.
GR   14.      1052.     16.       1070.      20.        1085.      30.
     36.      1120.     38.       1130.
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          4.    7800.      7800.      7800.
X1    66020.    15.        1000.      1150.       530.        530.        530.
GR    32.       1000.      30.        1019.       20.         1051.       18.
GR    14.3      1085.      16.        1095.       20.         1100.       26.
GR    34.       1129.      36.        1135.       38.         1140.       38.

QT        4.    8550.      8550.      8550.
X1    66420.    15.        1000.      1145.       400.        400.        400.
GR    32.6      1000.      30.        1020.       20.         1030.       16.
GR    16.       1065.      18.        1083.       20.         1095.       22.
GR    30.       1119.      32.        1128.       34.         1135.       36.

QT        4.    8600.      8600.      8600.
X1    66745.    11.        1000.      1150.       325.        325.        325.
GR    37.       1000.      34.        1010.       30.         1035.       20.
GR    15.3      1070.      16.        1085.       20.         1095.       30.
GR    40.       1150.

X1    67020.    13.        1000.      1150.       275.        275.        275.
GR    37.       1000.      34.        1010.       30.         1015.       20.
GR    15.6      1045.      18.        1065.       20.         1070.       22.
GR    30.       1120.      40.        1140.       42.         1150.

X1    67540.    19.        1000.      1170.       520.        520.        520.
GR    37.7      1000.      36.        1010.       34.         1014.       30.
      18.       1050.      16.2       1060.       16.         1065.       18.
      22.       1090.      24.        1100.       26.         1110.       28.
GR    36.       1150.      38.        1155.       40.         1160.       40.7

X1    67680.    17.        1000.      1160.       140.        140.        140.
GR    38.5      1000.      36.        1010.       32.         1020.       30.
GR    18.       1050.      16.4       1055.       18.         1060.       20.
GR    24.       1100.      26.        1110.       28.         1120.       30.
GR    40.       1150.      40.8       1160.

X1    68200.    17.        1000.      1230.       520.        520.        520.
GR    40.8      1000.      40.        1017.       38.         1020.       30.
GR    18.       1070.      17.        1100.       18.         1120.       20.
GR    24.       1135.      26.        1140.       28.         1145.       30.
GR    34.       1200.      41.7       1230.

X1    68555.    22.        1000.      1380.       355.        355.        355.
GR    40.       1000.      38.        1015.       34.         1024.       32.
GR    28.       1140.      24.        1145.       22.         1150.       20.
GR    17.4      1180.      20.        1195.       22.         1200.       24.
GR    28.       1230.      30.        1240.       32.         1280.       34.
GR    40.       1370.      41.        1380.
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      68900.   13.      1000.    1140.    345.     345.     345.
GR    41.6     1000.    40.      1015.    30.      1025.    20.
GR    17.8     1065.    18.      1075.    20.      1085.    22.
GR    30.      1110.    40.      1120.    42.2     1140.

X1    69415.   8.       1000.    1150.    515.     515.     515.
GR    43.      1000.    30.      1035.    20.      1040.    18.3
GR    30.      1115.    40.      1135.    43.      1150.

X1    69790.   8.       1000.    1175.    375.     375.     375.
GR    44.2     1000.    40.      1015.    30.      1030.    20.
GR    20.      1090.    30.      1120.    40.      1175.

X1    70285.   8.       1000.    1195.    495.     495.     495.
GR    41.5     1000.    40.      1010.    30.      1045.    20.
GR    30.      1150.    40.      1175.    45.4     1195.

X1    70730.   10.      1000.    1130.    445.     445.     445.
GR    42.      1000.    40.      1010.    30.      1020.    20.
GR    20.      1064.    30.      1090.    40.      1120.    42.

X1    71315.   10.      1000.    1160.    585.     585.     585.
GR    42.      1000.    40.      1035.    30.      1055.    20.
GR    20.      1120.    30.      1130.    40.      1150.    42.

      71970.   16.      1000.    1155.    655.     655.     655.
      42.3     1000.    42.      1020.    40.      1030.    30.
GR    22.      1060.    24.      1065.    28.      1080.    30.
GR    34.      1110.    36.      1120.    38.      1130.    40.
GR    44.5     1155.

X1    72085.   15.      1000.    1120.    115.     115.     115.
GR    40.8     1000.    40.      1010.    30.      1020.    20.4
GR    24.      1065.    26.      1070.    28.      1075.    30.
GR    38.      1100.    40.      1105.    42.      1110.    44.

QT        4.   8600.    8600.    8600.
X1    72300.   13.      1000.    1150.    215.     215.     215.
GR    42.      1000.    40.      1030.    30.      1045.    20.5
GR    28.      1080.    30.      1083.    34.      1100.    36.
GR    42.      1130.    44.      1140.    44.8     1150.

QT        4.   8600.    8600.    8600.
X1    72680.   17.      1000.    1190.    390.     390.     390.
GR    42.      1000.    40.      1040.    38.      1045.    32.
GR    28.      1065.    24.      1070.    20.8     1090.    22.
GR    32.      1115.    34.      1125.    36.      1135.    38.
GR    42.      1175.    44.      1190.
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         4.   8900.      8900.      8900.       7500.
X1   72800.   14.        1000.      1162.       120.        120.        120.
GR   45.      1000.      40.        1007.       35.         1012.       30.
GR   22.      1035.      21.        1047.       22.         1060.       25.
GR   35.      1120.      40.        1137.       45.         1144.       45.5

X1   72865.   10.        1000.      1155.       65.         65.         65.
GR   47.      1000.      44.        1013.       28.5        1045.5      18.
GR   25.      1071.      33.        1086.5      33.5        1121.       38.

NC                       .035
QT       4.   8950.      8950.      8950.
        LOCATION OF TRIMBLE RD  ALL SPILLS SPILL TO WEST BEGINNING OF IMPROVED
        CHANNEL TO HY 17
                                                                              -4
X1   73005.   7.         1000.      1183.       140.        140.        140.
GR   42.5     1000.      25.5       1057.       18.         1069.       18.
GR   29.5     1157.      43.        1183.

QT        4   9200.      9200.      9000.
X1   73115.   11.        1000.      1177.5      110.        110.        110.
GR   42.      1000.      22.        1049.       21.         1064.       18.
GR   20.5     1083.      22.        1104.       28.         1117.       31.
GR   48.      1177.5

          4   9700.      9700.      9500.
     73500.   10.        1000.      1178.       385.        385.        385.
GR   44.      1000.      25.        1040.       24.5        1051.       21.5
GR   18.      1085.      18.        1093.       20.5        1099.       22.5

QT        4   10200.     10200.     10000.
X1   73870.   8.         1000.      1168.       370.        370.        370.
GR   42.      1000.      23.        1037.       21.         1073.5      18.
GR   21.      1094.      23.        1130.       42.         1168.

QT        4   11700.     11700.     10700.
X1   74260.   8.         1000.      1170.       390.        390.        390.
GR   43.      1000.      23.5       1038.5      21.5        1075.       18.5
GR   21.5     1095.      23.5       1132.5      42.5        1170.

QT        4   12400.     12400.
X1   74590.   10.        1000.      1166.       330.        330.        330.
GR   43.      1000.      23.75      1038.       22.         1075.       19.
GR   22.      1095.5     23.75      1134.       40.5        1166.       41.

QT        4   12900.     12900.
X1   75010.   9.         1000.      1171.5      420.        420.        420.
GR   45.      500.       42.5       1000.       24.5        1036.       22.5
GR   19.5     1089.      22.5       1095.       24.5        1135.       43.
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         4  13600.     13000.
X1  75505.  8.         1000.      1174.      495.       495.       495.
GR  43.     1000.      25.5       1036.      23.        1076.      20.5
GR  23.     1096.      25.5       1165.5     44.        1174.

QT       4  14000.     13000.
X1  76005.  10.        1000.      1181.      500.       500.       500.
GR  44.     1000.      40.        1005.      36.        1016.      26.5
GR  21.     1091.      21.        1099.5     24.        1105.5     26.

QT       4  14300.     13000.
X1  76470.  8.         1000.      1175.      465.       465.       465.
GR  44.     1000.      26.5       1036.      24.5       1077.      21.5
GR  24.5    1097.      26.5       1139.      44.5       1175.

QT       4  14600.     13000.
X1  76970.  8.         1000.      1172.5     500.       500.       500.
GR  43.5    1000.      27.        1033.      25.        1075.5     22.
GR  25.     1095.      27.        1139.      44.5       1172.5

QT       4  15000.     13000.
X1  77430.  8.         1000.      1176.      460.       460.       460.
GR  45.     1000.      28.        1034.      26.        1078.      23.
GR  26.     1098.      28.        1142.5     45.        1176.

    77930.  8.         1000.      1183.      500.       500.       500.
    47.     1000.      28.8       1034.      26.3       1080.5     23.
GR  26.3    1100.      28.8       1146.      47.5       1183.

X1  78420.  10.        1000.      1245.      490.       490.       490.
GR  48.5    1000.      35.5       1027.      35.5       1040.      30.
GR  24.25   1102.      24.25      1110.      27.5       1116.      29.5

X1  78780.  11.        1000.      1236.      360.       360.       360.
GR  50.     1000.      30.        1041.      28.        1086.      25.
GR  28.     1106.      30.        1151.      35.        1161.      36.
GR  52.     1236.

X1  78830.  10.        1000.      1247.      50.        50.        50.
GR  50.     1000.      30.        1040.      28.        1085.      25.
GR  28.     1106.      30.        1151.      35.        1161.      36.
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   17JUL95       10:12:08

         GEORGE S. NOLTE AND ASSOCIATES                                      300-76-4
         FIS-CAPACITY - P. JORGENSEN  STA 455+00 - 788+00 10% FLOWS
T3       COYOTE (STP - HWY 17)

J1   ICHECK      INQ        NINV       IDIR       STRT      METRIC    HVINS      Q

                  5

J2   NPROF      IPLOT      PRFVS      XSECV      XSECH      FN        ALLDC      IBW

       15         0         -1
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 **************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 **************************************


 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY


 COYOTE CREEK (STP - HWY

 SUMMARY PRINTOUT


       SECNO      CWSEL      RBEL       XLBEL      VCH        Q          EG        K*XN

    45500.000      7.50       6.00       6.80      2.18    1200.00      7.57      45.
    45500.000      7.50       6.00       6.80      2.18    1200.00      7.57      45.

    46500.000      8.16       8.50       8.50      2.93    1500.00      8.29      45.
    46500.000      8.16       8.50       8.50      2.93    1500.00      8.29      45.

    47500.000      9.33       9.60       9.20      3.08    1500.00      9.47      45.
    47500.000      9.33       9.60       9.20      3.08    1500.00      9.47      45.

    48175.000     10.27      15.00      10.00      4.10    1500.00     10.53      45
    48175.000     10.27      15.00      10.00      4.10    1500.00     10.53      45

 *  48250.000     10.49      10.20      10.00      2.50    1500.00     10.59      45
 *  48250.000     10.49      10.20      10.00      2.50    1500.00     10.59      45

 *  48500.000     10.59      10.00      10.00      3.49    1500.00     10.77      45
 *  48500.000     10.59      10.00      10.00      3.49    1500.00     10.77      45

    48750.000     10.85      10.00      10.10      2.86    1500.00     10.97      45
    48750.000     10.85      10.00      10.10      2.86    1500.00     10.97      45

 *  49000.000     11.00      10.00      10.10      2.66    2000.00     11.10      45
 *  49000.000     11.00      10.00      10.10      2.66    2000.00     11.10      45

 *  49250.000     11.08      11.00      10.10      3.74    2000.00     11.28      45
 *  49250.000     11.08      11.00      10.10      3.74    2000.00     11.28      45

    49500.000     11.36      11.00       9.80       .95     600.00     11.38      45
    49500.000     11.36      11.00       9.80       .95     600.00     11.38      45

    49750.000     11.38      11.00       9.70      1.04     600.00     11.40      45
    49750.000     11.38      11.00       9.70      1.04     600.00     11.40      45
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17JUL95       10:12:08

      SECNO        CWSEL       RBEL        XLBEL        VCH         Q          EG        K*XNC

    50000.000      11.39      11.10      10.50       1.59     800.00      11.43        45.
    50000.000      11.39      11.10      10.50       1.59     800.00      11.43        45.

*   50400.000      11.47      11.90      11.00       1.02    1000.00      11.48        45.
*   50400.000      11.47      11.90      11.00       1.02    1000.00      11.48        45.

*   50750.000      11.48      12.80      10.90       2.08    1100.00      11.54        45.
*   50750.000      11.48      12.80      10.90       2.08    1100.00      11.54        45.

    51000.000      11.56      13.00      10.80       2.26    1150.00      11.63        45.
    51000.000      11.56      13.00      10.80       2.26    1150.00      11.63        45.

    51250.000      11.63      12.80      11.00       2.94    1200.00      11.76        45.
    51250.000      11.63      12.80      11.00       2.94    1200.00      11.76        45.

    51500.000      11.82      12.00      11.70       2.78    1200.00      11.94        45.
    51500.000      11.82      12.00      11.70       2.78    1200.00      11.94        45.

    51750.000      11.99      12.00      11.60       2.48    1200.00      12.09        45.
    51750.000      11.99      12.00      11.60       2.48    1200.00      12.09        45.

    52000.000      12.10      13.00      11.90       2.84    1200.00      12.23        45.
    52000.000      12.10      13.00      11.90       2.84    1200.00      12.23        45.

    52250.000      12.17      13.20      11.90       4.64    1200.00      12.50        45.
    52250.000      12.17      13.20      11.90       4.64    1200.00      12.50        45.

    52500.000      12.75      13.40      12.50       3.50    1200.00      12.95        45.
    52500.000      12.75      13.40      12.50       3.50    1200.00      12.95        45.

    52750.000      13.09      13.70      12.00       3.21    1400.00      13.24        45.
    52750.000      13.09      13.70      12.00       3.21    1400.00      13.24        45.

*   53000.000      13.31      13.90      13.00       3.14    1800.00      13.47        45
*   53000.000      13.31      13.90      13.00       3.14    1800.00      13.47        45

    53250.000      13.53      12.00      13.00       3.30    2100.00      13.70        45
    53250.000      13.53      12.00      13.00       3.30    2100.00      13.70        45

    53500.000      13.71      14.40      15.50       4.43    2100.00      14.01        45
    53500.000      13.71      14.40      15.50       4.43    2100.00      14.01        45

    53750.000      14.11      14.30      20.00       3.49    2100.00      14.30        45
    53750.000      14.11      14.30      20.00       3.49    2100.00      14.30        45

    54000.000      14.36      16.30      16.00       2.95    2100.00      14.49        45
    54000.000      14.36      16.30      16.00       2.95    2100.00      14.49        45

    54250.000      14.51      15.00      17.00       3.49    2100.00      14.70        45
    54250.000      14.51      15.00      17.00       3.49    2100.00      14.70        45
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  17JUL95        10:12:08

     SECNO        CWSEL       RBEL       XLBEL        VCH          Q          EG       K*XNC

  54500.000      14.77      16.00      17.50       3.75    2100.00      14.99       45.
  54500.000      14.77      16.00      17.50       3.75    2100.00      14.99       45.

* 54750.000      15.06      15.00      17.60       2.80    2100.00      15.19       45.
* 54750.000      15.06      15.00      17.60       2.80    2100.00      15.19       45.

  55000.000      15.21      16.50      17.10       2.63    2100.00      15.31       45.
  55000.000      15.21      16.50      17.10       2.63    2100.00      15.31       45.

  55250.000      15.32      16.00      17.70       2.73    2100.00      15.44       45.
  55250.000      15.32      16.00      17.70       2.73    2100.00      15.44       45.

  55500.000      15.46      16.50      17.80       3.27    2100.00      15.62       45.
  55500.000      15.46      16.50      17.80       3.27    2100.00      15.62       45.

  55750.000      15.67      16.10      17.60       2.84    2100.00      15.80       45.
  55750.000      15.67      16.10      17.60       2.84    2100.00      15.80       45.

  56000.000      15.82      15.00      17.30       2.62    2200.00      15.92       45.
  56000.000      15.82      15.00      17.30       2.62    2200.00      15.92       45.

  56250.000      15.90      15.40      17.20       3.30    2500.00      16.07       45.
  56250.000      15.90      15.40      17.20       3.30    2500.00      16.07       45.

  56500.000      16.06      15.30      17.50       4.20    2900.00      16.32       45.
  56500.000      16.06      15.30      17.50       4.20    2900.00      16.32       45.

  56750.000      16.26      16.20      17.80       5.96    3400.00      16.82       45
  56750.000      16.26      16.20      17.80       5.96    3400.00      16.82       45

* 57000.000      16.99      16.80      18.60       5.10    3900.00      17.38       45
* 57000.000      16.99      16.80      18.60       5.10    3900.00      17.38       45

  57250.000      17.40      17.00      19.00       5.50    4400.00      17.87       45
  57250.000      17.40      17.00      19.00       5.50    4400.00      17.87       45

  57500.000      17.68      19.20      19.00       7.34    4450.00      18.52       45
  57500.000      17.68      19.20      19.00       7.34    4450.00      18.52       45

  57750.000      18.56      19.80      19.00       7.47    4450.00      19.42       45
  57750.000      18.56      19.80      19.00       7.47    4450.00      19.42       45

  58000.000      19.56      21.00      19.00       6.02    4500.00      20.12       45
  58000.000      19.56      21.00      19.00       6.02    4500.00      20.12       45

  58235.000      20.12      20.00      20.00       5.38    4600.00      20.57       45
  58235.000      20.12      20.00      20.00       5.38    4600.00      20.57       45

  58500.000      20.54      20.00      19.00       5.45    5100.00      21.00       45
  58500.000      20.54      20.00      19.00       5.45    5100.00      21.00       45
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17JUL95       10:12:08

       SECNO      CWSEL      RBEL      XLBEL       VCH         Q           EG      K*XNC

    58830.000     20.92     22.00     20.50       7.01     5800.00      21.68       45.
    58830.000     20.92     22.00     20.50       7.01     5800.00      21.68       45.

    58960.000     21.38     22.00     22.00       6.37     5800.00      22.01       45.
    58960.000     21.38     22.00     22.00       6.37     5800.00      22.01       45.

 *  58990.000     21.70     25.00     24.60       4.73     5800.00      22.05       45.
 *  58990.000     21.70     25.00     24.60       4.73     5800.00      22.05       45.

    59010.000     21.72     25.00     24.60       4.73     5800.00      22.07       45.
    59010.000     21.72     25.00     24.60       4.73     5800.00      22.07       45.

 *  59035.000     21.10     20.00     22.00       8.06     5800.00      22.10       45.
 *  59035.000     21.10     20.00     22.00       8.06     5800.00      22.10       45.

    59140.000     21.74     20.00     21.00       6.38     5850.00      22.38       45.
    59140.000     21.74     20.00     21.00       6.38     5850.00      22.38       45.

    59380.000     22.23     29.00     28.00       6.27     5850.00      22.83       45.
    59380.000     22.23     29.00     28.00       6.27     5850.00      22.83       45.

 *  59915.000     23.19     26.00     27.50       8.04     5850.00      24.20       45.
 *  59915.000     23.19     26.00     27.50       8.04     5850.00      24.20       45.

    60400.000     24.89     27.30     28.70       6.67     5850.00      25.58       45.
    60400.000     24.89     27.30     28.70       6.67     5850.00      25.58       45.

    60695.000     25.50     27.20     28.60       7.33     5850.00      26.33       45.
    60695.000     25.50     27.20     28.60       7.33     5850.00      26.33       45.

 *  61100.000     26.51     27.80     28.80       3.50     5850.00      26.70       45.
 *  61100.000     26.51     27.80     28.80       3.50     5850.00      26.70       45.

 *  61600.000     26.60     31.00     37.50       5.32     5850.00      27.04       45
 *  61600.000     26.60     31.00     37.50       5.32     5850.00      27.04       45

    62360.000     27.60     31.50     28.50       5.56     5850.00      28.08       45
    62360.000     27.60     31.50     28.50       5.56     5850.00      28.08       45

    63020.000     28.55     31.00     28.50       5.03     5850.00      28.94       45
    63020.000     28.55     31.00     28.50       5.03     5850.00      28.94       45

    63300.000     28.92     31.10     28.50       4.38     5900.00      29.22       45
    63300.000     28.92     31.10     28.50       4.38     5900.00      29.22       45

    63690.000     29.18     33.50     28.80       5.40     6000.00      29.64       45
    63690.000     29.18     33.50     28.80       5.40     6000.00      29.64       45

    64060.000     29.66     34.20     28.50       5.75     6400.00      30.17       45
    64060.000     29.66     34.20     28.50       5.75     6400.00      30.17       45
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17JUL95        10:12:08

     SECNO        CWSEL       RBEL        XLBEL        VCH         Q          EG       K*XNC

   64470.000      30.29       35.50       29.00       5.13     7400.00      30.69       45.
   64470.000      30.29       35.50       29.00       5.13     7400.00      30.69       45.

   64570.000      30.48       35.00       29.60       4.45     7700.00      30.78       45.
   64570.000      30.49       35.00       29.60       4.33     7500.00      30.78       45.

*  64880.000      30.47       30.40       32.50       6.72     7700.00      31.17       45.
*  64880.000      30.48       30.40       32.50       6.54     7500.00      31.15       45.

   65490.000      31.81       38.00       32.50       6.88     7700.00      32.54       45.
   65490.000      31.75       38.00       32.50       6.73     7500.00      32.45       45.

   66020.000      32.93       38.10       32.00       5.99     7800.00      33.49       45.
   66020.000      32.83       38.10       32.00       5.82     7500.00      33.36       45.

   66420.000      33.56       38.00       32.60       5.92     8550.00      34.10       45.
   66420.000      33.46       38.00       32.60       5.23     7500.00      33.89       45.

   66745.000      33.86       40.00       37.00       7.51     8600.00      34.73       45.
   66745.000      33.70       40.00       37.00       6.66     7500.00      34.39       45.

   67020.000      34.67       42.00       37.00       6.33     8600.00      35.30       45.
   67020.000      34.34       42.00       37.00       5.69     7500.00      34.84       45.

   67540.000      35.53       40.70       37.70       5.49     8600.00      36.00       45.
   67540.000      35.05       40.70       37.70       5.00     7500.00      35.44       45.

   67680.000      35.61       40.80       38.50       6.06     8600.00      36.18       45.
   67680.000      35.12       40.80       38.50       5.53     7500.00      35.59       45.

*  68200.000      36.42       41.70       40.80       4.21     8600.00      36.70       45.
*  68200.000      35.81       41.70       40.80       3.89     7500.00      36.05       45.

   68555.000      36.77       41.00       40.00       3.05     8600.00      36.91       45
   68555.000      36.12       41.00       40.00       2.89     7500.00      36.25       45

*  68900.000      36.58       42.20       41.60       6.21     8600.00      37.18       45
   68900.000      36.01       42.20       41.60       5.64     7500.00      36.50       45

   69415.000      37.27       43.00       43.00       6.02     8600.00      37.84       45
   69415.000      36.59       43.00       43.00       5.55     7500.00      37.07       45

   69790.000      37.85       40.00       44.20       5.19     8600.00      38.27       45
   69790.000      37.09       40.00       44.20       4.84     7500.00      37.46       45

   70285.000      38.38       45.40       41.50       4.67     8600.00      38.71       45
   70285.000      37.57       45.40       41.50       4.37     7500.00      37.86       45

*  70730.000      38.50       44.00       42.00       6.77     8600.00      39.21       45
   70730.000      37.70       44.00       42.00       6.32     7500.00      38.32       45
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17JUL95       10:12:08

      SECNO       CWSEL       RBEL       XLBEL       VCH         Q           EG       K*XNC

    71315.000     39.49      45.70      42.00       5.75     8600.00      40.00       45.
    71315.000     38.59      45.70      42.00       5.37     7500.00      39.04       45.

*   71970.000     40.11      44.50      42.30       8.20     8600.00      41.15       45.
*   71970.000     39.16      44.50      42.30       7.89     7500.00      40.13       45.

    72085.000     40.62      44.60      40.80       7.36     8600.00      41.46       45.
    72085.000     39.66      44.60      40.80       6.98     7500.00      40.42       45.

*   72300.000     40.83      44.80      42.00       9.21     8600.00      42.15       45.
*   72300.000     39.76      44.80      42.00       9.10     7500.00      41.04       45.

*   72680.000     42.72      44.00      42.00       5.46     8600.00      43.18       45.
*   72680.000     41.63      44.00      42.00       5.41     7500.00      42.08       45.

*   72800.000     42.96      45.50      45.00       4.69     8900.00      43.30       45.
*   72800.000     41.91      45.50      45.00       4.28     7500.00      42.20       45.

*   72865.000     42.71      50.00      47.00       6.53     8900.00      43.37       45.
*   72865.000     41.69      50.00      47.00       6.04     7500.00      42.26       45.

*   73005.000     43.24      43.00      42.50       3.56     8950.00      43.44       35.
*   73005.000     42.16      43.00      42.50       3.23     7500.00      42.32       35.

    73115.000     43.26      48.00      42.00       3.64     9000.00      43.46       35.
    73115.000     42.18      48.00      42.00       3.25     7500.00      42.34       35.

    73500.000     43.36      44.00      44.00       3.28     9500.00      43.53       35.
    73500.000     42.28      44.00      44.00       2.77     7500.00      42.40       35.

    73870.000     43.40      42.00      42.00       3.48    10000.00      43.59       35.
    73870.000     42.32      42.00      42.00       2.79     7500.00      42.44       35.

    74260.000     43.44      42.50      43.00       3.80    10700.00      43.67       35
    74260.000     42.36      42.50      43.00       2.85     7500.00      42.49       35

    74590.000     43.57      40.50      43.00       3.37    10700.00      43.72       35
    74590.000     42.42      40.50      43.00       2.71     7500.00      42.53       35

    75010.000     43.57      43.00      42.50       3.85    10700.00      43.80       35
    75010.000     42.45      43.00      42.50       2.91     7500.00      42.58       35

    75505.000     43.70      44.00      43.00       3.57    10700.00      43.90       35
    75505.000     42.53      44.00      43.00       2.69     7500.00      42.64       35

    76005.000     43.77      43.00      44.00       3.85    10700.00      44.00       35
    76005.000     42.57      43.00      44.00       2.92     7500.00      42.70       35

    76470.000     43.85      44.50      44.00       4.17    10700.00      44.12       35
    76470.000     42.62      44.50      44.00       3.19     7500.00      42.78       35
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17JUL95       10:12:08

    SECNO        CWSEL      RBEL       XLBEL      VCH       Q          EG       K*XNC

76970.000        43.99     44.50      43.50     4.23   10700.00     44.27      35.
76970.000        42.71     44.50      43.50     3.24    7500.00     42.87      35.

77430.000        44.11     45.00      45.00     4.39   10700.00     44.41      35.
77430.000        42.78     45.00      45.00     3.39    7500.00     42.96      35.

77930.000        44.28     47.50      47.00     4.45   10700.00     44.58      35.
77930.000        42.89     47.50      47.00     3.46    7500.00     43.07      35.

78420.000        44.49     50.00      48.50     4.11   10700.00     44.75      35.
78420.000        43.03     50.00      48.50     3.27    7500.00     43.19      35.

78780.000        44.59     52.00      50.00     4.36   10700.00     44.89      35.
78780.000        43.10     52.00      50.00     3.47    7500.00     43.28      35.

78830.000        44.62     53.00      50.00     4.28   10700.00     44.91      35.
78830.000        43.12     53.00      50.00     3.41    7500.00     43.30      35.
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   17JUL95      10:12:08


 SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO=   48250.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   48250.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   48500.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   48500.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   49000.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   49000.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   49250.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   49250.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   50400.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   50400.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   50750.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   50750.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   52250.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   52250.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

   RNING SECNO=   53000.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
   RNING SECNO=   53000.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   54750.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
WARNING SECNO=   54750.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   57000.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
WARNING SECNO=   57000.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   58990.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
WARNING SECNO=   58990.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   59035.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
WARNING SECNO=   59035.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   59915.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
WARNING SECNO=   59915.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   61100.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
WARNING SECNO=   61100.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   61600.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
WARNING SECNO=   61600.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   64880.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
   RNING SECNO=   64880.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   68200.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
WARNING SECNO=   68200.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
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17JUL95       10:12:08


 .NING SECNO=   68900.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   70730.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   70730.000   PROFILE=   2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   71970.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   71970.000   PROFILE=   2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   72300.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   72300.000   PROFILE=   2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   72680.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   72680.000   PROFILE=   2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   72800.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   72800.000   PROFILE=   2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   72865.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   72865.000   PROFILE=   2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   73005.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   73005.000   PROFILE=   2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
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POST- Proj: HEC-2

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   15JUL95      11:15:45




*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


T1        HEC2 RUN FROM STA. 00 TO STA. 5150
T2        COYOTE REACH 1A
T3        MHHW = 4.7 @ S.F. BAY Q1%=12400 (PROFILE 1)

J1   ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q

        0          2

J2   NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW

       1          0         -1          0          0          0          0          0


J3   VARIABLE CODES FOR SUMMARY PRINTOUT

      38          1          24         23         26         43         3

     LPRNT     NUMSEC                         ********REQUESTED SECTION NUMBERS********

     -10        -10

NC     0.035      0.035      0.035        0.1         0.3
QT         2      12400       8300
                      ************FILE NAME : COY1A**********
         THIS IS A HEC2 RUN STARTING AT STA. 00 (BEGINNING OF BYPASS) AND ENDING
         AT STATION 5150. THIS IS A NEW BYPASS CHANNEL WITH A NON-FEMA STATIONIG
         THE ENDING STATION OF BYPASS MATCHES APPROXIMATELY AT FEMA STATION 49000
         THE 100-YEAR Q IS 12400 CFS (FEMA) ASSUMING ALL FLOWS COME TO BYPASS.
         THE STARTING WATER SURFACE IS BASED ON THE RESULTS FR. HEC2 FILE "COY A
         FR SPRR BRIDGE TO STA. 00, BEGINNING BYPASS, AT ELEVATION 7.06'

         n VALUES: EARTH=0.035,ROCK=0.035, CONC=0.018,REVEG & EX CHANNEL=0.055
         n=.030 FROM STA. 6982 TO 10450.
                      ------------BEGIN REACH 1-------------
X1         0         19          0         785
X3        10
GR       7.5          0          6          17          4         45        -2
GR        -7        150         -4         170         -2        190         4
GR         4        415         -4         525         -5        535        -5
GR         4        715          6         765          8        770        13

X1       500         14          0         970        500        500       500
          10
GR       6.8          0          4          50         -2         60        -6
GR         4        175          4         181          4        385       3.2
GR        -5        830         -5         920          4        950        1
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         1000          10           0         977         500         500         500
X3         10
GR         13           0           4          27           4         750          -4
GR         -6         820          -4         830           4         840           4

X1       1500          10           0         960         500         500         500
X3         10
GR         13           0           4          27           4         680          -4
GR         -5         730          -4         740           4         750           4

X1       2000          10           0         857         500         500         500
X3         10
GR         13           0           4          27           4         500          -4
GR         -5         600          -4         610           4         620           4

         BEGINNING OF THE LEVEE LOWERING #1 OPERATIONS.
X1       2690           8           0         900         690         690         690
X3         10
GR         13           0           4          27           4         240          -4
GR          4         350           4         850          13         900

         END OF THE LEVEE LOWERING #1 OPERATIONS.
X1       2750          11           0         827          60          60          6
X3         10
GR         13           0           4          27           4         180          -4
            4         240           4         600          -2         620          -
           13         827           0           0           0           0

         BEGINNING OF ISLAND #1.
X1       2751          15           0         900           1           1
X3         10
GR         13           0           4          27           4         180          -
GR          4         240           4         528          10         540          1
GR         -2         610          -2         800           4         820

X1       2790          15           0         900          39          39          3
X3         10
GR         13           0           4          27           4         180          -
GR          4         240           4         500          10         512          1
GR         -2         655          -2         800           4         820

X1       3000          15           0         850         210         210          21
X3         10
GR         13           0           4          27           4         130          -
GR          4         180           4         400          10         412          1
GR         -2         560          -2         750           4         770

         END OF ISLAND #1.
X1       3300          15           0         900         300         300          30
X3         10
           13           0           4          27           4         250          -
            4         295           4         480          10         492          1
GR         -2         630          -2         790           4         800
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        BEGINNING OF THE LEVEE LOWERING #2 OPERATIONS.
X1      3301         12          0        900         1         1         1
X3        10
GR        13          0          4         27         4       250        -4
GR         4        295          4        540        -2       558        -2
GR         4        840         13        900         0         0         0

X1      3650         12          0        900       349       349       349
X3        10
GR        13          0          4         27         4       420        -4
GR         4        470          4        680        -2       700        -2
GR         4        840         13        900

        END OF THE LEVEE LOWERING #2 OPERATIONS.
X1      4000          8          0        870       350       350       350
X3        10
GR        13          0          4         27         4       550        -4
GR         4        600          4        820        13       870         0

X1      5000          8          0        880      1000      1000      1000
X3        10
GR        13          0          4         27         4       700        -4
GR         4        760          4        850        13       880         0

X1      5150          8          0        900       150       150       150
          10
          13          0          4         27         4       620        -4
GR         4        670          4        850        13       900         0

X1      5151         10          0        900         1         1         1
X3        10
GR        13          0          4         27         4       620        -4
GR         4        670          4        782        10       800        10

X1      5249         13          0        900        98        98        98
X3        10
GR        13          0          4         27         4       500        -4
GR         4        570          4        672        10       690        10
GR        -2        810          4        850        13       900         0

        BEGINNING OF THE LEVEE LOWERING #3 OPERATIONS.
X1      5250         10          0        900         1         1         1
X3        10
GR        13          0          4         27         4       500        -4
GR         4        560          4        750        -2       770         4
```

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         HEC2 RUN FROM STA. 00 TO STA. 5150
         COYOTE REACH 1A
         HET=8.5 @ S.F. BAY  Q 10%=8300 (PROFILE 2)

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q

                  3

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW

     15         0          -1
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*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY


 MHHW = 4.7 @ S.F. BAY Q

SUMMARY PRINTOUT


      SECNO       CWSEL      RBEL      XLBEL       VCH        Q          EG      K*XNC

        .000       7.06     13.00       7.50      2.28   12400.00      7.14      35.
        .000       8.78     13.00       7.50      1.23    8300.00      8.80      35.

     500.000       7.18     13.00       6.80      2.35   12400.00      7.27      35.
     500.000       8.81     13.00       6.80      1.21    8300.00      8.83      35.

    1000.000       7.38     13.00      13.00      3.17   12400.00      7.53      35.
    1000.000       8.84     13.00      13.00      1.57    8300.00      8.88      35.

    1500.000       7.79     13.00      13.00      3.13   12400.00      7.94      35.
    1500.000       8.91     13.00      13.00      1.66    8300.00      8.96      35.

    2000.000       8.13     13.00      13.00      2.86   12400.00      8.26      35.
    2000.000       8.99     13.00      13.00      1.64    8300.00      9.03      35.

    2690.000       8.48     13.00      13.00      2.76   12400.00      8.59      35.
    2690.000       9.09     13.00      13.00      1.65    8300.00      9.13      35.

    2750.000       8.53     13.00      13.00      2.45   12400.00      8.62      35.
    2750.000       9.10     13.00      13.00      1.50    8300.00      9.14      35.

    2751.000       8.53     13.00      13.00      2.35   12400.00      8.62      35
    2751.000       9.10     13.00      13.00      1.44    8300.00      9.14      35

    2790.000       8.53     13.00      13.00      2.69   12400.00      8.64      35
    2790.000       9.10     13.00      13.00      1.65    8300.00      9.14      35

    3000.000       8.60     13.00      13.00      2.59   12400.00      8.71      35
    3000.000       9.13     13.00      13.00      1.61    8300.00      9.17      35

    3300.000       8.70     13.00      13.00      2.66   12400.00      8.81      35
    3300.000       9.16     13.00      13.00      1.66    8300.00      9.20      35
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   SECNO        CWSEL       RBEL       XLBEL       VCH         Q          EG       K*XNC

  3301.000       8.74      13.00      13.00       2.18   12400.00       8.81       35.
  3301.000       9.18      13.00      13.00       1.37    8300.00       9.20       35.

  3650.000       8.81      13.00      13.00       2.49   12400.00       8.91       35.
  3650.000       9.20      13.00      13.00       1.56    8300.00       9.24       35.

  4000.000       8.94      13.00      13.00       2.88   12400.00       9.07       35.
  4000.000       9.25      13.00      13.00       1.82    8300.00       9.30       35.

  5000.000       9.40      13.00      13.00       2.55   12400.00       9.50       35.
  5000.000       9.43      13.00      13.00       1.70    8300.00       9.47       35.

  5150.000       9.46      13.00      13.00       2.51   12400.00       9.55       35.
  5150.000       9.45      13.00      13.00       1.68    8300.00       9.50       35.

  5151.000       9.44      13.00      13.00       2.74   12400.00       9.56       35.
  5151.000       9.45      13.00      13.00       1.83    8300.00       9.50       35.

  5249.000       9.50      13.00      13.00       2.41   12400.00       9.59       35.
  5249.000       9.48      13.00      13.00       1.62    8300.00       9.52       35.

  5250.000       9.51      13.00      13.00       2.34   12400.00       9.60       35.
  5250.000       9.48      13.00      13.00       1.57    8300.00       9.52       35.
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 SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO=    1000.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=    1000.000  PROFILE=  2  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
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   15JUL95      11:18:04




**************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
**************************************


T1
T2
T3

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q

       0         2

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW

      1         0        -1         0         0         0         0         0


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     38         1          24        23         26         43         3

J3  LPRNT    NUMSEC                        ********REQUESTED SECTION NUMBERS*******

    -10       -10

NC     0.035      0.035      0.035       0.1         0.3
QT         2      12400       8300
                      ************FILE NAME : COY1B (RCURVE)*********
         THIS IS A HEC2 RUN STARTING AT STATION 5150 AND END AT STATION 10450.
         THE WATER SURFACE COMPUTATION IS RUN UPSTREAM THROUGH THE PROPOSED
         COYOTE CREEK BYPASS CHANNEL, THROUGH THE COYOTE CREEK REACH 1B MOUSE
         ISLANDS. STARTING WS BASED ON RESULTS FROM FILE "COY1A".=EL 9.46'
         n VALUES: EARTH=0.035,ROCK=0.035, CONC=0.018,REVEG & EX CHANNEL=0.055
         n=.030 FROM STA. 6982 TO 10450.
X1      5150          8          0         900        150         150        15
X3        10
GR        13          0          4          27          4         620         -
GR         4        670          4         850         13         900

X1      5151         10          0         900          1           1
X3        10
GR        13          0          4          27          4         620         -
GR         4        670          4         782         10         800         1

X1      5249         13          0         900         98          98         9
          10
          13          0          4          27          4         500         -
GR         4        570          4         672         10         690
GR        -2        810          4         850         13         900
```

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          BEGINNING OF THE LEVEE LOWERING #3 OPERATIONS.
X1      5250          10           0         900          1           1          1
X3        10
GR        13           0           4          27          4         500         -4
GR         4         560           4         750         -2         770          4

X1      5335          12           0         910         85          85         85
X3        10
GR        13           0           4          27          4         300         -4
GR        -4         370           4         390          4         650         -2
GR         4         860          13         910

          END OF THE LEVEE LOWERING #3 OPERATIONS.
X1      5420          11           0         930         85          85         85
X3        10
GR        13           0           4          27          4         180         -4
GR         4         250           4         500         -2         510         -2
GR        13         930           0           0          0           0

          BEGINNING OF ISLAND #2.
X1      5421          13           0         930          1           1
X3        10
GR        13           0           4          27          4         180         -
GR         4         250           4         430         10         442         1
GR        -2         850           4         870         13         930

        5500          14           0         980        149         149         14
X3        10
GR        13           0           4          27          4          80         -
GR         4         120           4         390         10         400         1
GR        -2         600          -2         900          4         920         1

          BEGINNING OF THE LEVEE LOWERING #4 OPERATIONS.
X1      5501          13           0         980          1           1
X3        10
GR        13           0           4          27          4          80         -
GR         4         120           4         410         10         430         1
GR        -2         900           4         920         13         980

          END OF ISLAND #2.
X1      5570          15           0        1000         69          69          6
X3        10
GR        13           0           4          27          4          50         -
GR         4          85           4         440         -2         460         -
GR        10         540          -2         570         -2         850

X1      5580          11           0        1000         10          10          1
X3        10
GR        13           0           4          27          4          50         -
GR         4          85           4         440         -2         460         -
          13        1000           0           0          0           0
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           END OF THE LEVEE LOWERING #4 OPERATIONS.
X1       5679          11           0        1120          99          99          9
X3         10
GR         13           0           4          27           4          50          -
GR          4          85           4         370          -2         390          -
GR         13        1120           0           0           0           0

           BEGINNING OF ISLAND #3.
X1       5680          14           0        1120           1           1
X3         10
GR         13           0           4          27           4          50          -
GR          4          85           4         280          10         290          1
GR         -2        1000           4        1050           4        1070          1

X1       5750          13           0        1220          70          70          7
X3         10
GR         13           0           4          27           4          40          -
GR          4          75           4         280          10         290          1
GR         -2        1100           4        1150          13        1220

           BEGINNING OF THE LEVEE LOWERING #5 OPERATIONS.
X1       5751          13           0        1220           1           1
X3         10
GR         13           0           4          27           4          40          -
GR          4          75           4         290          10         310          1
           -2        1100           4        1150          13        1220

           END OF ISLAND #3.
X1       5820          16           0        1250          69          69          6
X3         10
GR         13           0           4          27           4          40          -
GR          4          90           4         300          -2         336          -
GR         10         440          -2         470          -2        1150
GR         13        1250           0           0           0           0

X1       5830          12           0        1250          10          10          1
X3         10
GR         13           0           4          27           4          40          -
GR          4          90           4         300          -2         336          -
GR          4        1220          13        1250           0           0

           END OF THE LEVEE LOWERING #5 OPERATIONS.
X1       5930          11           0        1360         100         100          1
X3         10
GR         13           0           4          27           4          40          -
GR          4          80           4         260          -2         280          -
GR         13        1360           0           0           0           0
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           BEGINNING OF ISLAND #4.
X1      5931          13          0        1360           1           1           1
X3        10
GR        13           0          4          27           4          40          -4
GR         4          80          4         210          10         230          10
GR        -2        1200          4        1250          13        1360           0

X1      5980          13          0        1380          49          49          49
X3        10
GR        13           0          4          27           4          40          -4
GR         4          80          4         210          10         220          10
GR        -2        1220          4        1270          13        1380           0

X1      6050          14          0        1400          90          90          90
X3        10
GR        13           0          4          27           4          40          -4
GR         4          80          4         230          10         240          1
GR        -2        1300          4        1320           4        1373          1

           END OF ISLAND #4.
X1      6070          18          0        1410          20          20          2
X3        10
GR        13           0          4          27           4          40          -
GR         4          80          4         230          10         240          1
GR        -2         300         10         320          10         340          -
           4        1330          4        1383          13        1410

X1      6080          14          0        1415          10          10          1
X3        10
GR        13           0          4          27           4          40          -
GR         4          80          4         220          10         230          1
GR        -2        1305          4        1335           4        1388          1

X1      6500          12          0        1500         420         420         42
X3        10
GR        13           0          4          27          -4          40          -
GR         4         180         10         190          10         210          -
GR         4        1350         13        1500           0           0

X1      6740          13          0        1440         240         240         24
X3        10
GR        13           0          4          27           4          40          -
GR         4          80          4         250          10         260          1
GR        -2        1300          4        1350          13        1440

           BEGINNING OF ISLAND #5.
X1      6750          17          0        1440          10          10          1
X3        10
GR        13           0          4          27           4          40          -
GR         4          80          4         250          10         260          1
          -2         480         10         500          10         740          -
           4        1350         13        1440           0           0
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        6810         13          0       1360         60         60       60
X3        10
GR        13          0          4         27          4         40       -4
GR         4         80          4        310         10        330       1
GR        -2       1220          4       1270         13       1360

          END OF ISLAND #5
X1      6899         13          0       1300         89         89       8
X3        10
GR        13          0          4         27          4         60       -
GR         4         95          4        490         10        500       1
GR        -2       1100          4       1150         13       1300

X1      6900         14          0       1300          1          1
X3        10
GR        13          0          4         27          4         60       -
GR         4         95          4        450         10        500       1
GR        -2        684          3        685          3       1280       1

X1      6911         14          0       1250         11         11       1
X3        10
GR        13          0          4         27          4         60       -
GR         4         95          4        400         10        450       1
GR        -2        634          7        652          7       1230       1

          DOWNSTREAM TOP HINGE POINT OF THE ELEVATION 7.0 TIDE WEIR.
        6956         14          0       1300         45         45       4
X3        10
GR        13          0          4         27          4         60       -
GR         4         95        4.5        450          6        470
GR        -2        550          7        564          7       1200       1

NC       .03        .03        .03         .1         .3
          UPSTREAM TOP HINGE POINT OF THE ELEVATION 7.0 TIDE WEIR.
X1      6982         13          0       1300         26         26       2
X3        10
GR        13          0          4         27          4         60       -
GR         4         95        4.5        450          6        600       -
GR         7        648          7       1200         13       1300

X1      7000         15          0       1300         18         18       1
X3        10
GR        13          0          4         27          4         60       -
GR         4         95        4.5        450          6        600       -
GR         7        648          7        680          5        708

          APPROXIMATELY 25 FEET UPSTREAM OF THE TIDE GATE STRUCTURE.
X1      7350         20          0       1009        368        368      3
X3        10
GR        13          0          4         27          4        280
           7        295          7        300          7        310
           4        316          2        318        1.3        320      1
GR       3.3        900          3        948         10        990
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       7365         18          0       1009         15         15         15
X3       10
GR       13          0          4         27          4        240          6
GR        7        250          7        300          7        420          7
GR        4        455          2        462          2        800        3.3
GR       10        990         10       1000         13       1009          0

X1     7390         18          0       1009         25         25         2
X3       10
GR       13          0          4         27          4        240
GR        7        250          7        300          7        420
GR        4        455          2        462          2        800        3.
GR       10        990         10       1000         13       1009

X1     7405         16          0       1009         15         15         1
X3       10
GR       13          0          4         27        4.3        230
GR        7        450          4        468          2        480
GR        2        700          3        735          3        948         1
GR       13       1009          0          0          0          0

X1     7570         19          0        860        165        165         16
X3       10
GR       13          0          4         27        4.3        175
GR        7        330          7        350          4        368
        3.3        520          2        590        2.5        610
          3        798         10        840         10        850         1

X1     7640         12          0        778         70         70         7
X3       10
GR       13          0          4         27          4        250
GR        7        297          2        315          2        550
GR        7        760          3        778          0          0

X1     7680         12          0        718         40         40         4
X3       10
GR       13          0          4         27          4        190
GR        7        290          2        308          2        530
GR        7        700         13        718          0          0

X1     7740         12          0        698         60         60         6
X3       10
GR       13          0          4         27          4        235
GR        7        285          2        303          2        520
GR        7        680         13        698          0          0

X1     7800         15          0        768         60         60
X3       10
GR       13          0          4         27          4        210
GR        7        270          2        288        2.3        380
          2        530          2        570          7        600
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         7950          18           0         750         150         150         150
X3         10
GR         13           0           4          27           4          60           6
GR          7         130           2         148           2         220         2.4
GR          2         420         2.3         510           2         580           4
GR          7         720           7         732          13         750           0

X1       8000          15           0         750          50          50          50
X3         10
GR         13           0           7          18           7          40           2
GR        2.5         220           2         380           2         480         1.8
GR          3         620           3         695           7         720           7

X1       8005          12           0         750           5           5           5
X3         10
GR         14           0          10          12          10          22           4
GR          2         410         1.8         450           2         520           3
GR          7         729          14         750           0           0           0

X1       8300          11           0         771         295         295         295
X3         10
GR         14           0          10          12          10          22
GR          3         350         3.1         640           3         706
GR         14         771           0           0           0           0

      BEGINNING OF POND #49 CONSTRICTION.
         8550          12           0         811         250         250         25
X3         10
GR         14           0          10          12          10          22
GR        2.9         300         3.4         380         3.2         530
GR          7         790          14         811           0           0

X1       8800           9           0         721         250         250         25
X3         10
GR         14           0          10          12          10          22
GR          3         500           1         550           1         643           1

X1       9000           8           0         676         200         200          20
X3         10
GR         14           0          10          12          10          22
GR          1         440           1         598          14         676

      BEGINNING OF THE HARVEY AND STANLEY MITIGATION AREA.  EXCAVATION TO
      ELEVATION 2.4.
X1       9001           6           0         715           1           1
X3         10
GR         14           0          10          12          10          22          2.
GR         14         715           0           0           0           0
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       9615           6           0         715         614         614         614
X3       10
GR       14           0           7          21           7          41         2.4
GR       14         715           0           0           0           0           0

NH        2        .030         920         100        1565
X1     9645          11           0        1565          30          30          30
X3       10
GR       14           0           7          21           7          41         2.4
GR        7         665         6.6         765         6.3         920         6.1
GR       14        1565

NC     .030        .030        .030          .1          .3
        END OF THE HARVEY AND STANLEY MITIGATION AREA.  EXCAVATION TO EL. 2.4.
X1     9714          10           0        1615          69          69          69
X3       10
GR       14           0           7          21           7          41          3.
GR        7         665         6.6         765         6.1        1165

        DOWNSTREAM TOP HINGE POINT OF THE ELEVATION 5.0 WEIR.
X1     9740          11           0        1625          26          26          2
X3       10
GR       14           0           7          21           7          41
GR        8         695           8        1065           6        1071          6.
GR       14        1625           0           0           0           0

        UPSTREAM TOP HINGE POINT OF THE ELEVATION 5.0 WEIR.
X1     9760          11           0        1635          20          20          2
X3       10
GR       14           0           7          21           7          41
GR        8         695           8        1065           6        1071          6.
GR       14        1635           0           0           0           0

        BEGINNING OF 16.5 ACRE MANAGED BRACKISH WATER POND.
X1     9765          10           0        1655           5           5
X3       10
GR       14           0           7          21           7          41          4.
GR        8        1070           8        1090         6.1        1395

        DOWNSTREAM BOTTOM TOE OF 16.5 ACRE MANAGED BACKISH WATER POND.
X1     9980          16           0        1720         215         215         21
X3       10
GR       14           0         4.5         9.5         4.5        1200
GR        6        1265         5.6        1280           6        1315
GR        6        1380         6.1        1450         6.2        1550
GR       14        1720           0           0           0           0

        DOWNSTREAM TOP HINGE POINT OF 16.5 ACRE BRACKISH WATER POND ISLAND.
X1    10020          20           0        1720          40          40
X3       10
         14           0         4.5         9.5         4.5         325
        4.5         480         4.5        1200           7        1225
GR      5.6        1280           6        1315           6        1340          5
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          6.1        1450         6.2        1550           6        1600          4

            UPSTREAM TOP HINGE POINT OF 16.5 ACRE BRACKISH WATER POND ISLAND.
X1      10160          20           0        1700         140         140        140
X3         10
GR         14           0         4.5         9.5         4.5         290         12
GR        4.5         450         4.5        1185           8        1220          8
GR        5.6        1280           6        1315           6        1340        5.7
GR        6.1        1450         6.2        1550           6        1600          4

            UPSTREAM BOTTOM TOE OF 16.5 ACRE BRACKISH WATER POND ISLAND.
X1      10200          16           0        1700          40          40         40
X3         10
GR         14           0         4.5         9.5         4.5        1160          7
GR          6        1265         5.6        1280           6        1315          6
GR          6        1380         6.1        1450         6.2        1550          6
GR         14        1700           0           0           0           0          0

            END OF 16.5 ACRE MANAGED BRACKISH WATER POND.
X1      10425          11           0        1710         225         225        225
X3         10
GR         14           0           7          21           7         150        4.5
GR          7        1145           7        1180          10        1290          8
GR         14        1710           0           0           0           0          0

            DOWNSTREAM TOP HINGE POINT OF THE ELEVATION 7.0 HAUL ROAD.
        10450           4           0        1730          25          25         25
           10
GR         14           0           7          21           7        1670         1

              UPSTREAM TOP HINGE POINT OF THE EL 7.0 HAUL ROAD. END BYPASS STATION
X1      10475           4           0        1730          25          25         2
X3         10
GR         14           0           7          10           7        1670         1

X1      10490          14           0        1700          15          15          1
X3         10
GR         14           0          -2          10          -2          80         4.
GR          7         620           8        1100         9.1        1150          1
GR          8        1410           8        1560           7        1640          1

X1      10530          11           0        1710          40          40          4
X3         10
GR         14           0          .5          10          .5         470
GR          7         980        11.5        1140          10        1240          1
GR         14        1710           0           0           0           0

X1      10545           8           0        1700          15          15          1
X3         10
GR         14           0           2          10           2         900
GR          8        1200           8        1650          14        1700
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        .035        .035        .035          .1          .3
X1     10575          21           0        1480         230          30           3
GR        14           0           8          18           8          36         -3.
GR      10.5         155         -.9         240         -.9       739.8          -.
GR         7         815           7         830          14         865           1
GR         8        1200           6        1390         4.7        1395
GR        14        1480           0           0           0           0

X1     10580          25           0        1400         130           5
GR        14           0           8          18           8          36         -3.
GR        14         185          14         220         -.5         305          -.
GR       -.6         400         -.5         570         -.4         600          -.
GR       -.3         660          14         775          14         860
GR         8        1115           6        1200           6        1300

X1     10750          23           0        1320         170           5          17
GR        14           0           8          18           8          36         -3.
GR        14         185          14         220         -.2         305          -.
GR        14         480         -.3         560         -.3         590
GR        14         790           8         835         8.5         960
GR         6        1220           8        1302          14        1320

X1     10960          22           0        1210         210          45          21
GR        14           0           8          18           8          36         -3.
GR        14         185          14         220         -.1         305          -.
          14         470         -.2         550         -.2         580           1
          13         750           8         780         8.5         870
GR         6        1150          14        1210           0           0

NC      .035        .035        .035          .1          .3
X1     11000          22          15        1240          40          40           4
X3        10
GR        14           0          14          15        -3.5          70         -3.
GR        14         220           0         305           0         335           1
GR        -2         550          -2         580          14         660           1
GR         8         775         6.7         830           8         940          6.
GR         6        1216          14        1240           0           0

X1     11030          21           0        1190          30          30           3
X3        10
GR        14           0         8.5        16.5         8.5          35         -3.
GR        14         185          14         220           0         305
GR        14         465         -.1         545         -.1         575           1
GR         8         770           8         875         6.3        1010
GR        14        1190           0           0           0           0

X1     11125          24           0        1110          95          95           9
X3        10
GR        14           0         8.5        16.5         8.5          50         -3.
GR        14         200          .1         285          .1         315           1
          -2         520          -2         550           7         610           1
           8         730         6.9         820           6         880          5.
GR         7         990           8        1040           8        1086           1
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.        11305        23         0       915       180       180      18
X3          10
GR          14         0       8.5      16.5       8.5        75       6
GR          -2       120        -2       150         6       190       .
GR          14       340        14       380        .1       455       .
GR          14       625         8       640         8       670       6
GR         7.4       800         8       897        14       915

X1       11390        17         0       860        85        85       8
X3          10
GR          14         0         6        24         8        90       1
GR           6       120        .4       175        .4       240       1
GR          .2       420        .2       450        14       550
GR           8       842        14       860         0         0

X1       11465        17         0       780        75        75       7
X3          10
GR          14         0        10        12        10       190
GR           4       215        .5       225        .5       270
GR          -2       430         8       490         8       520
GR           7       759        14       780         0         0

X1       11565        17         0       720       100       100      10
X3          10
GR        14.7         0         5        30         6       190
             8       220         8       240        10       250
GR           4       300        -2       330        -2       400       1
GR           8       680      14.7       720         0         0

X1       11665        22         0       680       100       100      10
X3          10
GR        15.4         0        10        16        10       200
GR          10       300         8       310         8       330       1
GR           6       370         4       380        -2       400       -
GR           6       475         8       480        10       490       1
GR           8       637      15.4       680         0         0

X1       11940        16         0       490       275       275      27
X3          10
GR        17.3         0         9        25        10        75      7.
GR           6       310         4       312        -2       320       -
GR           6       370         6       380         8       390      9.
GR        17.3       490         0         0         0         0

NC        .035      .035      .035        .1        .3
X1       12085         8         0       340       145       145       1
X3          10
GR          18         0       7.5        30       7.5       170
GR           8       261         8       310        18       340
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       12170          8          0        335         85         85        85
X3        10
GR        18          0        7.5         30        7.5        165        -1
GR       7.5        255        7.5        290         18        335         (

X1     12190          8          0        320         20         20        2(
X3        10
GR        18          0        7.5         30        7.5        160        -1
GR       7.5        255        7.5        285         18        320         (
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T3
J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q
                 3
J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN       ALLDC     IBW
      2         0        -1
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 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY



SUMMARY PRINTOUT


      SECNO      CWSEL      RBEL      XLBEL       VCH        Q          EG      K*XN

    5150.000      9.46     13.00      13.00      2.51   12400.00      9.56       35
    5150.000      9.45     13.00      13.00      1.68    8300.00      9.49       35

    5151.000      9.45     13.00      13.00      2.74   12400.00      9.56       35
    5151.000      9.44     13.00      13.00      1.83    8300.00      9.50       35

    5249.000      9.51     13.00      13.00      2.41   12400.00      9.60       35
    5249.000      9.47     13.00      13.00      1.62    8300.00      9.51       35

    5250.000      9.52     13.00      13.00      2.34   12400.00      9.60       35
    5250.000      9.47     13.00      13.00      1.57    8300.00      9.51       35

    5335.000      9.56     13.00      13.00      1.94   12400.00      9.62       35
    5335.000      9.50     13.00      13.00      1.31    8300.00      9.52       35

    5420.000      9.59     13.00      13.00      1.68   12400.00      9.63       35
    5420.000      9.51     13.00      13.00      1.13    8300.00      9.53       35

    5421.000      9.58     13.00      13.00      1.74   12400.00      9.63       35
    5421.000      9.51     13.00      13.00      1.18    8300.00      9.53       35

    5500.000      9.59     13.00      13.00      1.99   12400.00      9.65       35
    5500.000      9.51     13.00      13.00      1.34    8300.00      9.54       35

    5501.000      9.60     13.00      13.00      1.92   12400.00      9.65       35
    5501.000      9.51     13.00      13.00      1.30    8300.00      9.54       35

    5570.000      9.62     13.00      13.00      1.63   12400.00      9.66       35
    5570.000      9.52     13.00      13.00      1.10    8300.00      9.54       35

    5580.000      9.63     13.00      13.00      1.51   12400.00      9.67       35
    5580.000      9.53     13.00      13.00      1.02    8300.00      9.54       35
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    SECNO       CWSEL      RBEL      XLBEL      VCH        Q          EG      K*XNC

  5679.000       9.65     13.00     13.00     1.20   12400.00      9.67      35.
  5679.000       9.54     13.00     13.00      .82    8300.00      9.55      35.

  5680.000       9.65     13.00     13.00     1.27   12400.00      9.67      35.
  5680.000       9.53     13.00     13.00      .86    8300.00      9.55      35.

  5750.000       9.65     13.00     13.00     1.28   12400.00      9.68      35.
  5750.000       9.54     13.00     13.00      .87    8300.00      9.55      35.

  5751.000       9.65     13.00     13.00     1.29   12400.00      9.68      35.
  5751.000       9.54     13.00     13.00      .87    8300.00      9.55      35.

  5820.000       9.66     13.00     13.00     1.07   12400.00      9.68      35.
  5820.000       9.54     13.00     13.00      .73    8300.00      9.55      35.

  5830.000       9.66     13.00     13.00     1.02   12400.00      9.68      35.
  5830.000       9.54     13.00     13.00      .69    8300.00      9.55      35.

  5930.000       9.67     13.00     13.00      .94   12400.00      9.68      35.
  5930.000       9.54     13.00     13.00      .64    8300.00      9.55      35

  5931.000       9.67     13.00     13.00      .97   12400.00      9.68      35
  5931.000       9.54     13.00     13.00      .66    8300.00      9.55      35

  5980.000       9.67     13.00     13.00     1.04   12400.00      9.68      35
  5980.000       9.54     13.00     13.00      .70    8300.00      9.55      35

  6050.000       9.67     13.00     13.00      .96   12400.00      9.69      35
  6050.000       9.55     13.00     13.00      .65    8300.00      9.55      35

  6070.000       9.67     13.00     13.00      .92   12400.00      9.69      35
  6070.000       9.55     13.00     13.00      .62    8300.00      9.55      35

  6080.000       9.68     13.00     13.00      .88   12400.00      9.69      35
  6080.000       9.55     13.00     13.00      .59    8300.00      9.55      35

  6500.000       9.68     13.00     13.00      .85   12400.00      9.70      35
  6500.000       9.55     13.00     13.00      .58    8300.00      9.56      35

  6740.000       9.69     13.00     13.00      .89   12400.00      9.70      35
  6740.000       9.55     13.00     13.00      .61    8300.00      9.56      35

  6750.000       9.68     13.00     13.00     1.18   12400.00      9.70      35
  6750.000       9.55     13.00     13.00      .80    8300.00      9.56      35

  6810.000       9.67     13.00     13.00     1.55   12400.00      9.71      35
  6810.000       9.55     13.00     13.00     1.06    8300.00      9.56      35

  6899.000       9.68     13.00     13.00     1.55   12400.00      9.72      35
  6899.000       9.55     13.00     13.00     1.06    8300.00      9.57      35
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     SECNO        CWSEL       RBEL        XLBEL        VCH        Q           EG        K*XNC

    6900.000       9.67      13.00       13.00        1.75   12400.00        9.72        35.
    6900.000       9.55      13.00       13.00        1.20    8300.00        9.57        35.

*   6911.000       9.62      13.00       13.00        2.83   12400.00        9.75        35.
*   6911.000       9.52      13.00       13.00        1.94    8300.00        9.58        35.

    6956.000       9.68      13.00       13.00        2.53   12400.00        9.78        35.
    6956.000       9.55      13.00       13.00        1.76    8300.00        9.60        35.

    6982.000       9.70      13.00       13.00        2.39   12400.00        9.79        30.
    6982.000       9.56      13.00       13.00        1.66    8300.00        9.60        30.

*   7000.000       9.74      13.00       13.00        1.90   12400.00        9.80        30.
*   7000.000       9.58      13.00       13.00        1.32    8300.00        9.61        30.

    7350.000       9.80      13.00       13.00        1.78   12400.00        9.85        30.
    7350.000       9.61      13.00       13.00        1.22    8300.00        9.63        30.

    7365.000       9.78      13.00       13.00        2.16   12400.00        9.85        30.
    7365.000       9.60      13.00       13.00        1.49    8300.00        9.63        30.

    7390.000       9.79      13.00       13.00        2.16   12400.00        9.86        30.
    7390.000       9.60      13.00       13.00        1.49    8300.00        9.64        30.

    7405.000       9.79      13.00       13.00        2.09   12400.00        9.86        30.
    7405.000       9.61      13.00       13.00        1.45    8300.00        9.64        30.

    7570.000       9.81      13.00       13.00        2.43   12400.00        9.90        30.
    7570.000       9.61      13.00       13.00        1.68    8300.00        9.66        30.

    7640.000       9.81       3.00       13.00        2.69   12400.00        9.92        30.
    7640.000       9.61       3.00       13.00        1.86    8300.00        9.67        30.

    7680.000       9.79      13.00       13.00        3.20   12400.00        9.95        30.
    7680.000       9.61      13.00       13.00        2.21    8300.00        9.68        30.

    7740.000       9.82      13.00       13.00        3.18   12400.00        9.97        30.
    7740.000       9.62      13.00       13.00        2.21    8300.00        9.69        30.

    7800.000       9.87      13.00       13.00        2.91   12400.00       10.00        30.
    7800.000       9.64      13.00       13.00        2.03    8300.00        9.71        30.

    7950.000       9.94      13.00       13.00        2.53   12400.00       10.04        30.
    7950.000       9.68      13.00       13.00        1.77    8300.00        9.73        30.

    8000.000       9.96      13.00       13.00        2.38   12400.00       10.05        30.
    8000.000       9.69      13.00       13.00        1.66    8300.00        9.73        30.

    8005.000       9.96      14.00       14.00        2.40   12400.00       10.05        30.
    8005.000       9.69      14.00       14.00        1.67    8300.00        9.73        30.
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     SECNO      CWSEL      RBEL      XLBEL       VCH         Q          EG      K*XN

   8300.000     10.01     14.00     14.00       2.55   12400.00      10.11       30
   8300.000      9.72     14.00     14.00       1.78    8300.00       9.76       30

   8550.000     10.08     14.00     14.00       2.42   12400.00      10.17       30
   8550.000      9.75     14.00     14.00       1.71    8300.00       9.79       30

   8800.000     10.12     14.00     14.00       2.64   12400.00      10.22       30
   8800.000      9.77     14.00     14.00       1.86    8300.00       9.82       30

   9000.000     10.15     14.00     14.00       2.76   12400.00      10.27       30
   9000.000      9.79     14.00     14.00       1.95    8300.00       9.85       30

   9001.000     10.17     14.00     14.00       2.56   12400.00      10.27       30
   9001.000      9.80     14.00     14.00       1.81    8300.00       9.85       30

   9615.000     10.29     14.00     14.00       2.49   12400.00      10.39       30
   9615.000      9.86     14.00     14.00       1.77    8300.00       9.91       30

   9645.000     10.37     14.00     14.00       1.44   12400.00      10.40       39
   9645.000      9.90     14.00     14.00       1.05    8300.00       9.91       38

   9714.000     10.37     14.00     14.00       1.55   12400.00      10.41       30
   9714.000      9.90     14.00     14.00       1.15    8300.00       9.92       30

   9740.000     10.37     14.00     14.00       1.84   12400.00      10.42       30
   9740.000      9.90     14.00     14.00       1.38    8300.00       9.93       30

   9760.000     10.37     14.00     14.00       1.83   12400.00      10.42       30
   9760.000      9.90     14.00     14.00       1.38    8300.00       9.93       30

   9765.000     10.39     14.00     14.00       1.52   12400.00      10.43       30
   9765.000      9.91     14.00     14.00       1.12    8300.00       9.93       30

   9980.000     10.42     14.00     14.00       1.33   12400.00      10.45       30
   9980.000      9.93     14.00     14.00        .97    8300.00       9.94       30

  10020.000     10.42     14.00     14.00       1.42   12400.00      10.45       30
  10020.000      9.93     14.00     14.00       1.05    8300.00       9.95       30

  10160.000     10.43     14.00     14.00       1.46   12400.00      10.46       30
  10160.000      9.94     14.00     14.00       1.08    8300.00       9.95       30

  10200.000     10.44     14.00     14.00       1.35   12400.00      10.47       30
  10200.000      9.94     14.00     14.00        .99    8300.00       9.96       30

  10425.000     10.45     14.00     14.00       1.64   12400.00      10.49       30
* 10425.000      9.95     14.00     14.00       1.24    8300.00       9.97       30

* 10450.000     10.44     14.00     14.00       2.16   12400.00      10.51       30
  10450.000      9.94     14.00     14.00       1.69    8300.00       9.98       30
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 15JUL95       11:18:04

       SECNO        CWSEL        RBEL        XLBEL        VCH          Q           EG      K*XN

   10475.000        10.45       14.00       14.00       2.15    12400.00       10.52       30
   10475.000         9.95       14.00       14.00       1.68     8300.00        9.99       30

   10490.000        10.47       14.00       14.00       1.87    12400.00       10.52       30
   10490.000         9.96       14.00       14.00       1.43     8300.00        9.99       30

*  10530.000        10.50       14.00       14.00       1.34    12400.00       10.53       30
*  10530.000         9.98       14.00       14.00        .98     8300.00       10.00       30

   10545.000        10.51       14.00       14.00       1.28    12400.00       10.53       30
   10545.000         9.99       14.00       14.00        .93     8300.00       10.00       30

   10575.000        10.51       14.00       14.00       1.32    12400.00       10.54       35
   10575.000         9.99       14.00       14.00        .95     8300.00       10.00       35

   10580.000        10.50       14.00       14.00       1.72    12400.00       10.54       35
   10580.000         9.98       14.00       14.00       1.25     8300.00       10.00       35

*  10750.000        10.49       14.00       14.00       2.63    12400.00       10.60       35
*  10750.000         9.98       14.00       14.00       1.97     8300.00       10.04       35

   10960.000        10.59       14.00       14.00       2.82    12400.00       10.71       35
   10960.000        10.04       14.00       14.00       2.11     8300.00       10.11       35

   11000.000        10.64       14.00       14.00       2.39    12400.00       10.73       35
   11000.000        10.07       14.00       14.00       1.79     8300.00       10.12       35

   11030.000        10.63       14.00       14.00       2.72    12400.00       10.75       35
   11030.000        10.07       14.00       14.00       2.05     8300.00       10.13       35

   11125.000        10.70       14.00       14.00       2.48    12400.00       10.79       35
   11125.000        10.10       14.00       14.00       1.88     8300.00       10.16       35

   11305.000        10.74       14.00       14.00       3.16    12400.00       10.90       35
   11305.000        10.14       14.00       14.00       2.37     8300.00       10.23       35

   11390.000        10.77       14.00       14.00       3.58    12400.00       10.97       35
   11390.000        10.16       14.00       14.00       2.74     8300.00       10.27       35

   11465.000        10.87       14.00       14.00       3.27    12400.00       11.03       35
   11465.000        10.22       14.00       14.00       2.51     8300.00       10.32       35

   11565.000        10.92       14.70       14.70       3.58    12400.00       11.12       35
   11565.000        10.26       14.70       14.70       2.75     8300.00       10.38       35

*  11665.000        10.82       15.40       15.40       6.09    12400.00       11.39       35
*  11665.000        10.18       15.40       15.40       5.09     8300.00       10.58       35

   11940.000        11.75       17.30       17.30       6.00    12400.00       12.31       35
   11940.000        11.00       17.30       17.30       4.76     8300.00       11.35       35
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15JUL95        11:18:04

     SECNO       CWSEL      RBEL       XLBEL       VCH        Q          EG       K*XN

 12085.000       12.02      18.00      18.00       6.50   12400.00      12.68       35.
 12085.000       11.22      18.00      18.00       4.98    8300.00      11.61       35.

 12170.000       12.20      18.00      18.00       6.43   12400.00      12.85       35.
 12170.000       11.35      18.00      18.00       4.95    8300.00      11.73       35.

 12190.000       12.24      18.00      18.00       6.44   12400.00      12.88       35.
 12190.000       11.37      18.00      18.00       4.94    8300.00      11.75       35
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15JUL95       11:18:04


 SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO=    6911.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=    6911.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=    7000.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=    7000.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   10425.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   10450.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   10450.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   10530.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   10530.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   10750.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   10750.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   11665.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   11665.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN

WARNING SECNO=   11940.000   PROFILE=  2   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
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 15JUL95       11:04:12



*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


T1          HEC2-RUN FROM STA. 50000 TO STA. 57100, 100 FT D/S CROSSOVER AREA.
T2          COYOTE REACH 2A and 2B
T3          STARTING WATER SURFACE BASED ON FILE "COY 2A"(RCURVE)

J1   ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS     Q

        0          2

J2   NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC     IBW

       1          0         -1          0          0          0          0         0


J3   VARIABLE CODES FOR SUMMARY PRINTOUT

      38          1          24         23         26         43         3

     LPRNT     NUMSEC                         ********REQUESTED SECTION NUMBERS*******

     -10        -10

NC     0.035      0.035      0.035       0.1        0.3
QT        1       12400
                      ******** FILE NAME: COY2A.DAT ***********
            THIS IS A HEC2 RUN STARTING AT STA. 12190 WHICH IS AT FEMA STA. 5000
            THE STARTING WS IS COMPUTED THROUGH HEC2 FILE  "COY1B" (RCURVE)
            WHICH IS AT EL 12.24'.
            BEGINNING AT STATION 50000 AND
            THROUGH DIFFERENT CROSS OVER AREAS , THROUGH THE CCRS BUILDING PAD,
            AREAS, THE REACH WILL END AT STA. 57100. SEE FILE "COY2B" (R2-3NO.FG
            FOR HEC2 RUN FROM STA. 57100 TO U/S OF HWY 237).
            n VALUES: EARTH=0.035,ROCK=0.035, CONC=0.018,REVEG & EX CHANNEL=0.05
            BEGIN REACH 2A AND FEMA STATIONS
X1     50000          8          0         320          0          0
X3        10
GR        18          0        7.5          30        7.5        160
GR       7.5        255        7.5         285         18        320

NC      .035       .035       .035          .1         .3
            CREEK REALIGNMENT (STANDISH DAM REMOVED)
X1     50300          8          0         310        300        300        3(
          10
        18.5          0        7.5          30        7.5        160
GR       7.5        255        7.5         280       18.5        310
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   15JUL95        11:04:12


              END  CROSS  OVER  AREA  #1.
X1     51300           9           0          501          115          85         100
GR      19.9           0         9.3           32          7.5          95         7.5
GR        .1         211         7.6          235          8.6         465        19.9

NC      .035        .035        .035           .1           .3
X1     51400          10           0          490          105          90         100
GR        20           0         9.5           30          7.5         100         7.5
GR       .15         197         7.6          220          7.6         330         8.6

NC      .035        .035         .07           .1           .3
X1     51900          12           0          506          500         500         500
GR     20.34           0       11.24         28.5          9.7          32         7.7
GR       7.7         155         -.1          175          -.1         190         7.7
GR       8.8         470        20.4          506

X1     52400          14           0          506          500         500         500
GR     20.74           0        10.4           35          7.9         103         7.9
GR        12         180          .6          200           .6         218        11.7
GR       8.1         281         8.1          330          9.1         470        20.7

X1     52900          15           0          508          500         500         500
GR     21.14           0       11.31           29         10.1          35         8.1
GR      11.8         193        12.6          230          -.5         262         -.5
GR      12.7         310        10.6          332         8.30         340         9.3

              BEGIN  REVEGETATION  AREA  AND  CROSS  OVER  AREA  #2.
X1     53200          15           0          608          310         300         300
GR     21.38           0        11.5           37         11.5         145        10.2
GR       8.2         217        13.2          237            0         269           0
GR      11.8         370         8.1          374          9.1         492         9.1

NH         5        .035         297          .07          384        .035         488
NH       670
X1     53300          16           0          670          115         100         100
GR     21.46           0        11.5           37         11.4         207        10.3
GR         7         248          .5          265           .5         297        12.5
GR       8.1         384         9.2          488          9.2         618        12.3
GR      21.4         670                                     0           0           0

NH         5        .035         150          .07          265        .035         472
NH       686
              BEGIN  COYOTE  CREEK  RIPARIAN  STATION.
X1     53400          14           0          686           70         120          90
GR      21.5           0        17.1           18         17.4          40        11.6
GR        13         210          .5          243           .5         265
GR       8.4         371         9.4          472          9.4         650        21.4
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   15JUL95       11:04:12


             5          .035          175          .07          295          .035          500
NH         670
X1       53500            14            0          670           70           110           80
GR       21.63             0         11.7           35           12           110         13.3
GR          .6           202           .6          226         12.6           261         12.6
GR         8.4           377          9.4          500          9.5           632         21.5

NH           5          .035           45          .07          247          .035          540
NH         717
               END CROSS OVER AREA #2.
X1       53600            16            0          717           50           110           60
GR        21.8             0         19.2            6         19.2            25        11.75
GR        13.4            92           16          122            0           160            0
GR          12           235          8.5          247          8.5           400          9.2
GR        21.5           717

NH           5          .035           25          .07          311          .035          615
NH         822
X1       53700            15            0          822           70           100           80
GR       21.81             0           12           25         16.9            65         16.6
GR          .8           161           14          180         13.2           212          9.9
GR         8.6           317          8.6          468          9.1           615          9.6

NH           5          .035           27          .07          384          .035          691
NH         920
         53900            15            0          920          215           200          215
         21.85             0           13           27         15.5            37         15.6
GR         1.1           107         13.5          133           13           173         10.5
GR         8.6           389          8.6          552          9.3           691          9.6

NH           5          .035           27          .07          423          .035          751
NH         958
X1       54400            17            0          958          500           500          500
GR       21.95             0         14.3           27           17            48           1
GR         1.5            93         11.7          136         11.7           146         15.
GR        11.5           423          8.7          432          8.7           607          9.6
GR         9.7           922         21.9          958

NH           5          .035           24          .07          273          .035          61
NH         820
X1       55400            14            0          820          510           500          51
GR        22.1             0         15.2           24         15.5            40
GR        16.3           148         12.1          166         12.0           273          8.
GR         9.8           610           11          615          9.8           785          2

NH           4          .035           43          .07          180          .035          54
               McCARTHY RANCH HOUSE.
X1       56100            15            0          677          400           320          30
GR        22.1             0         15.9           20           16            43          2.6
GR        16.6           171         16.5          180           12           202          8.
           9.9           540         11.2          545           11           618          9.
   15JUL95      11:04:12


         4     .035        40       .07       211      .035       48
          END REVEGETATION AREA.
X1   56300       12         0       520       200       200       20
GR    22.3        0      16.1        20      16.2        40       2.
GR    17.3      160        17       183      11.7       211       8.
GR     9.9      480      22.1       520

NC    .035     .035       .07        .1        .3
          350 FT UPSTREAM OF CILKER PROPERTY.
X1   56400       12         0       437       100       100       10
GR    22.4        0        16        20      16.8        43       2.
GR    17.5      160      17.5       178      11.5       211       9.
GR    9.95      400     22.25       437

X1   56500       12         0       398       100       100       10
GR    22.5        0        16        20      17.3        47       2.
GR    17.9      154      18.1       171      11.3       204       9.
GR    10.0      360      22.3       398

X1   56900       12         0       390       265       300       27
GR    22.8        0      17.1        20      17.7        39
GR    18.1      140      16.7       167        13       177       9.
GR    10.4      351      22.6       390

          END OF RUN.
     57100       11         0       389       200       200       20
      23.5        0        19        22        19        40       3.
GR    17.8      120      17.8       147      10.3       173      10.
GR    23.3      389
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  15JUL95       11:04:12



*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY

   STARTING WATER SURFAC

SUMMARY PRINTOUT

      SECNO       CWSEL      RBEL      XLBEL      VCH         Q          EG      K*XN

   50000.000      12.24     18.00      18.00      6.44  12400.00      12.88       35

   50300.000      12.82     18.50      18.50      6.00  12400.00      13.38       35

   50325.000      12.85     18.50      18.50      6.01  12400.00      13.41       35

   50345.000      12.84     18.50      18.50      6.36  12400.00      13.47       35

   50365.000      12.92     18.50      18.50      6.13  12400.00      13.50       35

*  50390.000      13.39     18.50      18.50      5.25  12400.00      13.82       70

   50395.000      13.42     18.50      18.50      5.24  12400.00      13.84       70

   50490.000      13.86     18.50      18.50      5.22  12400.00      14.28       70

   50740.000      14.97     18.90      18.90      4.08  12400.00      15.22       70

   50900.000      15.59     19.40      18.50      3.30  12400.00      15.76       70

*  51000.000      15.66     19.60      19.70      3.42  12400.00      15.84       35

   51100.000      15.71     19.70      19.70      3.25  12400.00      15.88       35

   51200.000      15.75     19.80      19.80      3.28  12400.00      15.91       35

   51300.000      15.79     19.90      19.90      3.21  12400.00      15.95       35

   51400.000      15.82     19.90      20.00      3.28  12400.00      15.99       35

*  51900.000      16.15     20.40      20.34      3.11  12400.00      16.30       70

   52400.000      16.84     20.70      20.74      3.22  12400.00      17.00       70
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15JUL95       11:04:12

     SECNO       CWSEL      RBEL      XLBEL       VCH         Q          EG      K*XN

   52900.000     17.52     21.14      21.14      3.00   12400.00     17.66       70
   53200.000     17.87     21.30      21.38      2.54   12400.00     17.97       70
*  53300.000     17.94     21.40      21.46      2.34   12400.00     18.02       48
   53400.000     17.97     21.40      21.50      2.27   12400.00     18.05       51
   53500.000     18.00     21.50      21.63      2.35   12400.00     18.09       50
   53600.000     18.04     21.50      21.80      2.18   12400.00     18.11       54
   53700.000     18.08     21.60      21.81      1.89   12400.00     18.14       55
   53900.000     18.16     21.80      21.85      1.62   12400.00     18.20       57
   54400.000     18.28     21.90      21.95      1.65   12400.00     18.32       57
   55400.000     18.40     22.00      22.10      1.84   12400.00     18.46       55
   56100.000     18.46     22.10      22.10      2.20   12400.00     18.54       43
*  56300.000     18.50     22.10      22.30      2.93   12400.00     18.63       53
   56400.000     18.55     22.25      22.40      3.67   12400.00     18.76       70
   56500.000     18.72     22.30      22.50      4.14   12400.00     18.99       70
   56900.000     19.39     22.60      22.80      4.17   12400.00     19.66       70
   57100.000     19.90     23.30      23.50      4.40   12400.00     20.20       70
   15JUL95      11:04:12


 SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO=   50390.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   51000.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   51900.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   53300.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   56300.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   56400.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
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   15JUL95      10:58:39



**************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
**************************************


T1        HEC2-RUN FROM STA. 57100 TO D/S OF HIGHWAY 237
T2        COYOTE CREEK REACH 2, BY CONG MAI
T3        STARTING WATER SURFACE BASED ON HEC2 FILE "COY2A'.

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q

       0          2

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW

      1          0         -1          0          0          0         -1          0


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     38          1          24          23          26          43          3

    LPRNT     NUMSEC                 ********REQUESTED SECTION NUMBERS*******

    -10        -10

NC     0.035      0.035      0.035        0.1         0.3
QT         1      12400
                     *********FILE NAME:COY2B (R2-3NO.FG)**********
           THIS RUN STARTS AT STA. 57100 AND ENDS AT STA. 59650 (D/S HWY 237)
            STARTING WS IS BASED ON  HEC2 FILE "COY2A"(REACH2.3)
X1     57100         11          0        389          0          0
GR      23.5          0         19         22         19         40         3.
GR      17.8        120       17.8        147       10.3        173        10.
GR      23.3        389

NH         3       .035         22        .07        105       .035         38
X1     57200         11                   386         90        107          9
GR      23.7          0       19.8         22       19.4         41         4.
GR      18.1        130       10.4        161       11.4        330          1
GR      23.4        386

NH         5       .035         45        .07         75       .035         30
NH       390
X1     57300         13          0        390         78        120          9
GR      23.8          0       19.2         22       19.9         45         4.
         7.5        121        7.5        136       10.5        145        11.
        16.5        349       16.5        367       23.9        390
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15JUL95   10:58:39

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            3       .035        251        .07        366       .035        407
       BEGIN CROSS OVER AREA.
X1      57400         15          0        407         50        145         80
GR       23.9          0       19.2         21       19.2         45        7.5
GR        4.5         95        4.5        127        7.5        137        7.5
GR       10.8        233       16.6        251       16.6        366       16.6

NH          3       .035        210        .07        363       .035        403
X1      57500         17          0        403         75        120         95
GR       24.0          0         17         21         17         35         11
GR        7.5        100        7.5        117        4.5        127        4.5
GR        7.5        189       10.5        200       10.5        210       16.7
GR       16.7        382       24.1        403

NH          3       .035        220        .07        366       .035        407
X1      57600         14          0        407         93         90        100
GR         24          0       23.8         22       11.5         52       10.6
GR        7.5        170        4.5        180        4.5        220       19.6
GR         17        271       16.8        366       16.8        385       24.1

NH          3       .035        227        .07        372       .035        413
X1      57700         11          0        413        100         90         95
GR         24          0         12         35       10.6        184         12
GR          5        264       19.5        285       19.5        299         17
GR       24.1        413

         .035       .035        .07         .1         .3
       END CROSS OVER AREA.
X1      57800         10          0        395        110        100        100
GR       24.1          0         12         36       10.6        191         18
GR          5        269          5        294       19.5        315         17

X1      57900         13          0        405        110         90        100
GR       25.5          0       17.2         25       12.2         37       10.7
GR       17.8        227       21.6        246       21.5        259        3.5
GR       19.9        340       20.2        390       25.5        405          0

X1      58400         11          0        409        520        475        500
GR       25.9          0       16.7         30       12.4         38       10.9
GR       22.3        250        3.7        292        3.7        320       20.8
GR         26        409                                0          0          0

NH          3       .035        231        .07        365       .035        427
X1      58900         11          0        427        600        400        500
GR       26.4          0       16.8         30       12.7         40        11.
GR         22        275        4.2        298        4.2        321        20.
GR       26.3        427                                0          0
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   15JUL95       10:58:39


         .035       .035       .07        .1        .3
X1      59030         10         0       412       160         60        85
GR       26.3          0      12.8        36      11.5        200      22.2
GR          5        279         5       301      21.7        346      21.7

NH          3       .035       251       .07       298       .035       362
X1      59100         11         0       362       136         83       10
GR       26.4          0      19.2        25      19.2         43      12.4
GR       11.5        210         5       225         5        251      21.7
GR       26.3        362

NC       .035       .035      .035        .1        .3
X1      59140         10         0       343        37         26        2
GR       26.4          0        12        42      11.5        151
GR          5      185.5         5     210.5        22        262        2

X1      59150         10         0       310        20         10        1
GR       26.4          0        12        42      11.5        136
GR          5      170.5         5     195.5        22        247        2

X1      59180         10         0       265        53         30        4
GR       26.4          0      11.9        42      11.5         92
GR          5      126.5         5     151.5        22        203        2

NC       .035       .035      .030        .1        .3
        59250          9         0       210        70         60        8
         26.0          0      11.5        40         8         51
GR          5        100        22       148        22        198      25.

X1      59280          8         0       203        28         20        2
GR       25.5          0        22      16.5         8         56
GR         22        146        22       192      25.5        203

                D/S OLD BRIDGE (SKEWED TO FLOWLINE 55 DEGREES.)
X1      59300          9         0       200        17         17        1
GR       26.0          0        22        20         6         69
GR          6         94        22       145        22        189        2

X1      59301         13         0       199         1          1
GR       26.3          0        22        20         6         69
GR        6.5         85         6      85.5         6       88.5       6.
GR         22        145        22       188        26        199

X1      59302         11         0       199         1          1
GR       26.5          0        22        20         6         68
GR        6.5         81         6      81.1         6         94        2
GR         26        199
```

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15JUL95       10:58:39


        .035       .035       .018
X1     59310         12          0        196          6          6          6
GR      26.0          0         22       21.5        6.5         66        6.5
GR       6.8         78        6.5       78.1          6         85        6.5
GR        22        185       25.5        196

X1     59319          9          0        191          9          9          9
GR      25.5          0         22         21          7         62          7
GR         7         89         22        138         22        180       25.3

X1     59320         13          0        191          1          1          1
GR      25.3          0         22         21          7         62          7
GR       7.5         79          7       79.5          7       82.5        7.5
GR        22        138         22        180       25.2        191

X1     59321         11          0        191          1          1          1
GR      25.3          0         22         21          7         62          7
GR       7.5         75          7       75.1          7         88          2
GR      25.2        191

NC      .035       .035       .018         .2         .4
X1     59335          8          0        174         14         14         14
GR      25.4          0       22.5         14        7.5         45
GR      22.5        120       22.5        163         25        174

       59337          8          0        174          2          2          2
        25.3          0       22.5         14        7.5         45
GR      22.5        120       22.5        163         25        174

X1     59380         10          0       82.1         40         40          4
X2                                         23         31
X3        10
GR        23          0         18         .1        7.8         22         7.
GR        23         41        7.8       41.1        7.8         60          1

X1     59500         10          0       82.1         30         30          3
X2                                         23         31
X3        10
GR        23          0         18         .1          8         22
GR        23         41          8       41.1          8         60          1

                U/S OLD BRIDGE (SKEWED TO FLOWLINE 55 DEGREES.)
                TOP OF ROAD IS RAISED UP TO 31' EL.
X1     59550          7          0        173        118         40          8
X3        10
GR        26          0         20          7         20         34
GR        20        105       25.6        173
```

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   15JUL95        10:58:39


                     DOWNSTREAM OF 237 (SKEWED TO FLOWLINE 57 DEGREES.)
X1     59650          16          0      129.6         67        210        135
X2                                          25         29
X3        10
GR      28.2           0       26.9        5.4       20.4      14.04         12
GR        25       44.14         25      45.64          8      45.65          8
GR        25       87.64         12      87.65         12     104.49       20.4
GR      29.1       129.6
```

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   15JUL95      10:58:39



*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY


 STARTING WATER SURFACE

SUMMARY PRINTOUT


      SECNO       CWSEL      RBEL      XLBEL      VCH        Q        EG      K*XN
    57100.000     19.90     23.30     23.50     4.40  12400.00    20.20      35.
    57200.000     19.99     23.40     23.70     4.40  12400.00    20.29      44.
    57300.000     20.10     23.90     23.80     4.28  12400.00    20.38      43
    57400.000     20.15     24.00     23.90     4.53  12400.00    20.46      33
    57500.000     20.23     24.10     24.00     4.41  12400.00    20.53      33
    57600.000     20.28     24.10     24.00     4.63  12400.00    20.62      32
    57700.000     20.42     24.10     24.00     4.25  12400.00    20.70      39
*   57800.000     20.54     24.20     24.10     4.48  12400.00    20.86      70
    57900.000     20.86     25.50     25.50     4.39  12400.00    21.16      70
    58400.000     22.12     26.00     25.90     3.81  12400.00    22.34      70
*   58900.000     22.62     26.30     26.40     3.65  12400.00    22.83      39
*   59030.000     22.68     26.30     26.30     4.08  12400.00    22.93      70
*   59100.000     22.80     26.30     26.40     4.09  12400.00    23.06      40
    59140.000     22.79     26.40     26.40     4.36  12400.00    23.08      35
    59150.000     22.76     26.40     26.40     4.64  12400.00    23.10      35
    59180.000     22.68     26.40     26.40     5.72  12400.00    23.18      35
    59250.000     22.44     25.50     26.00     7.99  12400.00    23.43      30
```

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15JUL95       10:58:39

     SECNO      CWSEL      RBEL      XLBEL       VCH        Q         EG     K*XNC
  59280.000     22.31     25.50     25.50      8.95   12400.00     23.55      30.
  59300.000     22.11     26.00     26.00     10.11   12400.00     23.70      30.
  59301.000     22.05     26.00     26.30     10.42   12400.00     23.73      30.
  59302.000     22.20     26.00     26.50      9.98   12400.00     23.75      30.
* 59310.000     22.01     25.50     26.00     10.86   12400.00     23.85      18.
  59319.000     21.85     25.30     25.50     11.60   12400.00     23.94      18.
  59320.000     21.71     25.20     25.30     12.15   12400.00     24.00      18.
  59321.000     21.89     25.20     25.30     11.71   12400.00     24.01      18.
  59335.000     21.51     25.00     25.40     13.40   12400.00     24.30      18.
  59337.000     21.51     25.00     25.30     13.40   12400.00     24.30      18.
  59380.000     21.20     23.00     23.00     14.88   12400.00     24.63      18.
  59500.000     21.22     23.00     23.00     15.06   12400.00     24.74      18.
  59550.000     22.53     25.60     26.00     12.88   12400.00     25.10      18.
* 59650.000     24.04     29.10     28.20      9.71   12400.00     25.50      18
```

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  15JUL95      10:58:39


 SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO=   57800.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   58900.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   59030.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   59100.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   59310.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   59650.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
```

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   15JUL95       10:26:09


**************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
**************************************


T1                        9/18/90  COYOTE CREEK GDM
T2                               FINAL DECK
T3                            COY3A.DAT 6/25/95

J1  ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q

       0          2

J2  NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW

      1          0         -1          0          0          0         -1         0


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     38          1         24         23         26         43          3

J5  LPRNT    NUMSEC                     *******REQUESTED SECTION NUMBERS*******

    -10        -10
  FIRST SECTION STARTS AT STA. 59650 (D/S 237 BR.)

NC      .018       .018       .018         .3         .5
QT         1      12400
X1     59650          8       1018       1198        140        130         14
  GDM 56910
GR      25.6        999       25.6       1018        5.2       1108         5.
GR      25.5       1193         26       1198         26       1208
   SKEWED BRIDGE (HWY237)

X1     59740         14       1000       1097        280        180         23
  GDM 57140
X2                                      26.18       30.3
GR      30.3       1000       19.5       1000       12.8       1010        12.
GR       7.8       1045        6.8       1046        6.8       1051         7.
GR      12.8       1069       12.8       1087       19.5       1097        30.

SB      1.25        1.6        2.5        195         60          6        147
X1     60040          0          0          0        200        200         20
  GDM
X2                               1      26.18       30.3
```

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       .035        .035        .055         .1          .3
X1    60300          30        1416       1571       220.0       320.0       260.
   GDM 57600
X3       10
GR     18.4        1000        18.7     1051.8          19      1119.9         1
GR     20.6      1204.1          21     1253.1        22.5      1262.8       23.
GR     27.4      1287.1        30.7     1346.5        30.1      1397.6       30.
GR     30.3        1416         6.8       1461         6.8        1501         3
GR       19      1636.4          19     1641.4          19      1711.4         1
GR       19      1896.2          19     1946.9          19      2001.6         1

X1    60500          46      1390.2     1706.4       200.2       200.3       200.
   GDM 57800
X3       10
GR     18.2      1342.8        17.3       1345          17      1346.1         1
GR       31      1372.2        31.4     1372.2        31.4      1390.2         2
GR       19      1451.2        18.4     1453.2        20.9      1458.4       20.
GR     25.9      1482.9        25.8     1483.3        26.1      1483.8       25.
GR     21.3      1509.7        21.1       1510        20.9      1510.5       20.
GR     10.6        1534     8.19999     1535.2          10      1561.8         1
GR     19.1      1579.9        21.3     1583.2        21.5      1583.6         2
GR       10      1613.9          10     1625.4          28      1679.9         2
GR     31.4      1726.4        19.1     1747.7          19      1798.6       18.
GR     18.7        1868           0          0           0           0

      60600          20      1380.3     1724.8        99.9        99.8       100.
   GDM 57900
X3        1    0
GR     31.5      1362.0        31.5     1380.3        16.1      1420.3       16.
GR     26.5      1516.3           8     1561.3           8      1591.3       10.
GR     13.0      1634.3          17     1649.3        17.0      1667.3       26.
GR     31.4      1743.2        19.9     1764.3        19.8        1821       19.

X1    60700          45      1368.3     1743.1        99.8        99.8       100.
   GDM 58000
X3       10
GR       18        1000          18     1001.9        19.3      1022.2         2
GR     20.1      1074.4        25.3     1090.4        27.1        1095       27.
GR       28      1107.2          28     1148.9        28.2      1191.9       28.
GR     24.9      1229.9        18.8     1248.2          17      1263.1         1
GR     31.5      1350.2        31.5     1368.3        16.1      1411.6       16.
GR     26.0      1511.5         8.0     1557.8         8.0      1589.1       10.
GR       13      1633.0        14.0     1672.3        14.0      1691.6       31.
GR     31.6      1761.4        20.2     1781.8        20.2      1796.8       20.
GR     20.3      1861.7          20     1911.8        20.1      1965.7       20.

X1    60900          65      1344.5     1779.5       200.4       200.5       200.
   GDM 58200
X3       10
GR     23.7        1000          26     1006.5        26.1      1058.3       26.
       26.5      1080.8          27     1088.9          26      1141.4       24.
       24.1      1153.1          24     1153.4          24      1153.7       21.
GR     20.2      1193.3        20.1       1194        18.4      1266.2       18.
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       31.9    1326.4      31.9    1344.5      30.3    1346.4      17
       18.1    1390.5      18.1    1408.6      17.1    1410.6      17
GR     17.7    1428.6        18    1430.5        18    1433.3    18.6
GR     18.7    1444.5      24.9    1465.2        26    1469.5      26
GR     21.9    1496.7      15.5    1514.8      13.3    1524.1    12.4
GR     10.5    1535.1      10.3    1535.8       8.5    1543.6     8.5
GR       10    1609.6      12.6    1619.6      16.4    1709.6    16.4
GR     20.1      1748      30.3    1779.5      31.8    1779.5    31.8
GR     21.1    1873.2      20.7    1924.8      20.4    1961.6    20.5

X1    60989        40    1335.7    1795.8      89.4      89.4    89.4
   GDM 58289
X3       10
GR     25.7      1000        26    1054.1      25.6    1089.5    24.4
GR       19    1121.6        19    1172.9        19    1176.8    20.1
GR       21    1225.3        21    1241.3        20    1259.7    19.6
GR     19.1    1293.1      30.3    1315.7      32.2    1315.7    32.2
GR     17.6    1393.1        19    1403.1        26    1461.1      26
GR        8    1555.1        10    1570.1        10    1585.1    12.5
GR     16.7      1750        20    1763.9      30.4    1795.8    32.2
GR     20.5    1834.2        21    1908.9        21    1964.3    20.9

X1    61100        25      1311    1806.6     108.0     123.1   110.6
   GDM 58400
X3       10
GR       18    1190.7        18    1198.9      18.6    1249.5    18.8
       32.3      1291      32.3      1311      18.4      1341    18.4
       19.6    1379.2        27      1407        27      1421       8
GR       26      1524        26      1539        19      1548    12.5
GR       29      1786      30.4    1806.6      32.2    1806.6    32.2

X1    61451        34    1279.3    1810.7     256.0      65.0   190.0
   GDM 58468
X3       10
GR     18.1      1000        18    1000.4        17    1051.4      17
GR     17.8    1204.8      17.9    1235.4      18.2    1235.9    32.4
GR    18.91    1319.3     18.91    1337.3      20.0    1357.3      26
GR      8.0    1418.0       8.0    1457.3      26.0    1480.3      26
GR     19.0    1536.0     12.41    1556.0      19.0    1780.0    32.
GR     30.3      1829      20.5    1848.7      20.7    1912.3    20.9
GR       21    1964.3      20.9    2022.2      20.7    2073.2    20.7

X1    61626        29      1253    1837.0     245.0      15.0   176.0
   GDM 58713
X3       10
GR       20      1000        20    1024.5      18.2      1036     1
GR       17    1158.2      17.1    1207.5      29.7    1233.2    32.5
GR     20.0    1290.0      19.0    1308.0      19.0    1312.0     2
GR     23.0    1356.0        23    1374.0       8.0    1408.0
GR       26    1507.0      19.0    1550.0      22.0    1797.0    32.
GR       20    1909.6      20.3    1960.6        21    2012.1    20.
```

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     61759          35      1213.9      1844.9       188.0        15.0       100.0
   GDM 58910
X3      10
GR    15.1        1000          16      1056.7          17        1063        19.1
GR    17.7      1126.1          17      1129.3        16.2      1140.4        16.1
GR      16      1166.6        32.6      1195.8        32.6      1213.9          28
GR    18.0      1267.9        18.0      1349.9        19.0      1355.9        22.0
GR    25.0      1398.9         8.0      1417.9         8.0      1451.9          26
GR    18.0      1675.9        13.2      1795.9        14.5      1797.9        19.0
GR    32.2      1864.9        20.0      1886.4          20      1908.5          20

X1   62012          25      1193.7      1955.7       247.0        85.0        160.
   GDM 59158
X3      10
GR    18.2        1000        18.9      1061.7          19      1122.8          19
GR    17.4      1141.4          17      1143.6          17      1148.3        32.6
GR    15.0      1228.7        15.0      1246.7        12.0      1483.7        13.
GR    19.0      1539.7        19.0      1564.7          17      1584.7        17.
GR       5      1782.7          28      1822.7          28      1932.7        32.2

X1   62293          20      1197.8      1988.8        63.0       146.0       100.
   GDM 59225
X3      10
GR    18.1        1000        18.1      1051.7          18      1107.6          1
GR    32.6      1179.8        32.6      1197.8        15.0      1232.8        15.
      13.0      1539.8        13.2      1761.8        19.0      1782.8          1
       5.0      1913.8          29      1924.8        29.0      1938.8        32.

X1   62500          17        1206      1910.0        75.0       243.0         14
   GDM 59300
X3      10
GR    17.1        1000          17        1071        15.8      1157.9        32.
GR    15.1      1240.0        15.1        1258        12.2      1586.0        18.
GR      20        1733          20      1753.0         8.0      1820.0         8.
GR    32.5      1910.0        32.5      1930.0

X1   62600          40      1205.6      1866.6        95.9       105.4       100.
   GDM 59400
X3      10
GR      15        1000          15      1001.5        14.8        1005        14.
GR    14.4      1094.4        14.5      1095.7        15.2      1124.8        15.
GR    15.7      1136.8        15.7      1137.3        15.8      1137.8        15.
GR    15.8      1142.1        15.8      1143.9        15.7      1144.7        15.
GR    15.5      1156.7        32.7      1187.6        32.7      1205.6        15.
GR    12.1      1612.6        17.0      1622.6        13.5      1670.6        19.
GR     8.0      1766.6         8.0      1800.6          28      1849.6        32.
GR    27.9      1934.4          29      1939.1          29      1941.9        28.
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   15JUL95        10:26:09


        62800          35      1159.1        1777       178.8       200.7       200.0
   GDM 59600
X3         10
GR       17.4        1000        17.3      1000.5          17      1058.7        17.1
GR       32.8      1141.1        32.8      1159.1        15.4      1194.1        15.4
GR       18.0      1526.1        13.6      1574.1          19      1589.1          20
GR       22.0      1637.1        29.0      1647.1          29      1660.1           8
GR         22      1762.1        32.5      1777.0        32.5      1795.1        26.5
GR       24.4      1811.1        24.3      1811.7        24.3      1811.9        23.8
GR         22      1827.2        21.8      1872.2        21.3      1925.4          21
```

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  15JUL95      10:26:09



*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY

                       COY3A

SUMMARY PRINTOUT

      SECNO        CWSEL      RBEL      XLBEL       VCH        Q          EG       K*XN

   59650.000       24.04     26.00      25.60      7.06   12400.00      24.82       18.

*  59740.000       23.69     30.30      30.30     10.37   12400.00      25.36       18.

   60040.000       24.24     30.30      30.30      9.93   12400.00      25.77       18.

   60300.000       25.18     30.00      30.30      7.90   12400.00      26.15       55.

*  60500.000       26.30     31.40      31.40      3.51   12400.00      26.57       55

   60600.000       26.39     31.40      31.50      4.48   12400.00      26.70       55

   60700.000       26.63     31.60      31.50      3.56   12400.00      26.82       55

   60900.000       26.83     31.80      31.90      2.90   12400.00      26.96       55

   60989.000       26.88     32.20      32.20      2.77   12400.00      27.00       55

   61100.000       26.93     32.20      32.30      3.12   12400.00      27.08       55

   61451.000       27.09     32.20      32.41      2.56   12400.00      27.19       55

   61626.000       27.17     32.20      32.50      3.09   12400.00      27.32       55

   61759.000       27.29     32.20      32.60      2.47   12400.00      27.39       55

*  62012.000       27.39     32.20      32.60      1.38   12400.00      27.42       55

   62293.000       27.41     32.40      32.60      1.23   12400.00      27.43       55

   62500.000       27.41     32.50      32.70      1.45   12400.00      27.44       55

   62600.000       27.42     32.50      32.70      1.49   12400.00      27.45       55
```

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15JUL95       10:26:09

      SECNO       CWSEL      RBEL       XLBEL       VCH         Q           EG       K*XN
  62800.000       27.44      32.50      32.80      1.70   12400.00       27.48        55.
```

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15JUL95      10:26:09


 SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO=   59740.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   60300.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   60500.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   62012.000   PROFILE=  1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
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   17JUL95      11:48:03


*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


T1               9/18/90  COYOTE CREEK GDM
T2                 "SPLIT" FLOW - NATURAL
T3       COY3CH.DAT (NATURAL CHANNEL RUN - SPLIT FLOW)

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q

       0         2

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN       ALLDC     IBW

      1         0        -1         0         0         0        -1         0


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

     38          1         24         23         26         43          3

J3  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS*******

    -10       -10

NC     .035       .035       .055         .1          .3
QT        1       3350
         CROSS SECTIONS IN THIS RUN MATCHES THE AS-BUILT CONSTRUCTION PLANS
         FOR THE CORPS CHANNEL MODIFICATIONS IN THE CHANNEL SECTION FOR REACH
         3B.
X1     62800        65      1649.9       1777           0           0
   GDM 59600
X3       10
GR      17.4       1000       17.3     1000.5          17      1058.7        17.
GR      31.1     1141.1       31.1     1159.1          18        1199          1
GR      19.1     1221.9       18.3     1223.7          18      1224.2          1
GR      14.2     1301.2       14.3     1351.7        14.2      1388.7          1
GR        14     1508.2         18     1527.1        19.4        1586        19.
GR      21.5     1612.5       22.6     1622.3          23      1628.8        27.
GR      28.9       1644         29     1644.4          29      1649.9        28.
GR      21.3     1664.8       20.9     1665.3        20.2      1666.3        16.
GR     9.699     1692.3         10     1715.4          16      1728.1        17.
GR        20     1737.8       22.4     1744.9        24.6      1756.4        24.
GR      30.9     1795.1       26.5     1803.8        26.1      1804.8          2
GR      24.4     1811.1       24.3     1811.7        24.3      1811.9        23.
          22     1827.2       21.8     1872.2        21.3      1925.4          2
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        62900          53      1611.0      1727.7       157.2       183.1       200.0
  GDM 59800
X3         10
GR       18.7        1000        19.2      1003.3        19.4      1056.4        19.5
GR       31.2      1139.6        19.4      1176.1        19.4      1178.7        19.5
GR       20.3      1198.6          19      1201.3          19      1210.9        18.9
GR       17.1      1332.9        16.4      1363.8        15.6      1375.8        13.8
GR       20.1      1540.5          20      1560.7        19.5      1563.6        22.8
GR       23.9      1585.1          27      1609.3          27        1611        26.6
GR       26.4      1613.5        24.7      1620.4        17.4      1631.8        17.1
GR       16.5      1633.1          10      1638.9     9.80000      1673.4        10.
GR       15.9      1681.9        17.5        1686        20.4      1691.2          21
GR       16.8      1721.5          31      1727.7          31      1745.7          21
GR       20.6        1841          21      1904.1        20.6      1958.1

X1      63000          65      1609.7      1728.2       132.7       161.6       181.
  GDM 59981
X3         10
GR         20        1000          20      1052.4          20      1107.3          2
GR       31.4      1157.8          17      1201.3          17      1204.2          1
GR       17.1      1225.8        17.1      1227.1        16.9      1228.3        16.
GR       15.2      1399.7          14      1510.6        14.3      1511.3          2
GR         21        1569          23      1576.1        23.3      1578.3        23.
GR         27      1609.7        25.8      1618.2        21.8      1625.2        21.
GR       19.4      1628.9          10      1637.6          10      1677.4        10.
         19.2      1698.9        26.8      1713.4        26.9      1713.7        26.
GR       29.9      1724.7        31.1      1728.2        31.1      1746.2          2
GR       22.8      1767.7        22.8      1768.1        22.7      1768.5        22.
GR       22.5      1770.2        21.8      1777.5        21.6      1781.3        21.
GR       21.4      1782.5        21.4      1782.7        21.5      1783.2        21.
GR       20.8      1849.1        20.2      1894.6        20.1      1895.7          2

X1      63050          65      1610.3      1729.5          19          19        19.
 GDM 60000
X3         10
GR         20        1000          20      1051.3          20      1103.9          2
GR       33.4        1159          17      1202.5          17        1205        17.
GR       18.1      1225.1        17.2      1226.9          17      1227.2        16.
GR       15.3      1388.3        14.2      1495.9        14.1      1509.3        20.
GR         21      1566.9        21.3      1567.9        21.6      1569.4          2
GR       24.3      1587.1        24.2        1588        24.2      1589.7        24.
GR       25.4      1596.4        25.6      1597.9        26.9      1603.7          2
GR       26.6      1615.9        26.5      1616.5        26.1      1621.6          2
GR       17.5        1630        15.3      1631.5          10      1636.2          1
GR       13.8      1680.2        13.9      1680.2        14.1      1680.7        14.
GR       23.1      1704.2          24      1705.6        25.9      1709.2        27.
GR       26.6      1723.5        30.4      1727.6        33.1      1729.5        33.
GR         27      1757.1        26.8        1761        26.3      1767.5        26.
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       63200          47      1588.2      1743.1        200.1        200.1        200.
    GDM 60200
X3        10
GR      20.1        1000          20        1052         20.4       1123.7          20
GR      32.5      1154.4        32.5      1172.4           18       1213.2          18
GR        19        1237        18.8      1237.3           18       1238.9          18
GR      17.4      1294.5        16.9      1347.5         16.1       1419.7        15.4
GR        23      1542.6          23      1550.7         24.7       1551.5          26
GR      30.6      1588.2        28.7      1597.3         27.1       1601.1        11.6
GR        11      1643.3        11.3        1648           15       1653.1        23.8
GR      28.2      1708.1          31      1713.4           31       1715.1        25.9
GR      26.9      1730.3        33.2      1743.1         33.2       1761.1        22.4
GR      20.9      1922.5        20.8        1965            0            0           0

X1     63400          65      1585.3      1756.7        200.2        200.8       200.0
    GDM 60400
X3        10
GR      20.6        1000        20.8      1054.3           21       1130.3          2
GR      32.6      1185.7          18      1226.7           18       1229.3          1
GR      18.2        1251        18.2      1252.8           18       1253.2         17.
GR      16.3      1410.9        15.7      1477.3         22.9       1499.3         22.
GR      23.1      1536.5        23.4      1537.3         23.7       1539.4         23.
GR        28      1570.3          28      1585.3         27.9       1585.6         27.
GR      27.6      1586.3        27.4      1586.8         27.2       1587.5         23.
GR      20.2      1612.3        19.6      1614.5         19.5         1615         15.
        13.3      1638.1          11      1646.3           11       1675.5         15.
          27      1710.4        27.3      1711.2         31.7       1721.3           3
GR      28.4      1732.4        29.3      1734.1         26.9       1735.5         26.
GR      33.3      1756.7        33.3      1774.7         23.7       1789.9         23.
GR      23.6      1848.4        23.3      1851.4         23.3       1852.8         22.

X1     63600          45      1561.4      1774.3        200.4        201.6        200.
    GDM 60600
X3        10
GR        21        1000          21      1003.3         21.1       1004.5           2
GR        21      1163.7        32.7        1185         32.7         1203           2
GR        22      1239.6          22      1257.6         21.3       1259.1           2
GR      16.3      1385.2        16.3        1469         22.7       1480.4           2
GR      24.6        1511        24.6      1511.9           25       1515.7         24.
GR        26      1561.4        24.8      1566.5         22.8       1574.2           1
GR      15.7      1662.3        17.2      1664.8           28       1694.2         30.
GR        28      1735.1        27.8      1735.5           28       1736.4         24.
GR      33.4      1792.4        22.4      1810.4         21.9       1881.5         21.

X1     63800          62      1581.0      1849.7        205.9        201.0        200.
    GDM 60800
X3        10
GR        21        1000        21.6      1056.6         21.7       1106.8         21.
GR        22      1231.6        32.8      1251.4         32.8       1269.7         22.
GR      22.4      1305.4        23.1      1306.8         23.1       1325.1         22
        21.4      1380.4          21      1433.5         16.4       1484.7         16
          26      1563.5          26        1570           26         1581         14
GR      13.7      1616.6          12        1621           12       1636.6
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         24      1686.4        24.1      1686.6         25.4       1691.5        25.8
       27.3      1698.8        27.7      1701.1         28.5         1714        28.8
GR       30      1732.3        29.5      1737.6         29.5       1737.9        30.5
GR     28.5      1745.7        27.4      1754.6         26.8       1765.2        25.1
GR       25      1779.4          24      1791.6         23.4       1812.3        23.3
GR       23      1826.5        33.5      1849.7         33.5         1866          22
GR     21.6      1963.6        21.5      2018.6            0            0           0

X1    63850          59      1586.8        1851         29.2         18.7        16.5
   GDM 60817
X3       10
GR       21        1000        21.7      1060.9         21.8       1111.6        21.8
GR       22      1226.5          22      1239.4         22.1       1239.6        22.2
GR     32.8      1277.8        22.2      1307.7         22.2       1312.6        23.1
GR     23.2      1332.9        22.6      1334.1         22.3       1334.9          22
GR     16.5      1452.6        16.5      1506.4         16.6       1549.1        25.6
GR       26      1583.3          26      1586.8         21.5       1599.9          18
GR       12      1623.2          12      1644.9         13.9       1656.6        14.1
GR     19.9        1687        23.3      1698.3         26.9       1720.4        27.8
GR       30      1736.8        30.4      1738.7         29.8       1754.9          29
GR     27.3      1774.9          26      1781.4         25.9       1781.7        25.9
GR     23.1      1808.4        23.1      1809.6           23       1811.5        22.7
GR     33.5      1867.7          22      1885.6         21.7       1959.4        21.6

X1    63900          58      1633.9      1869.8         11.7         94.2       117.0
   GDM 60934
         10
       21.5        1000        21.5      1005.4           22       1083.6        22.4
GR     22.9      1239.9          23      1240.6         23.1       1285.3          33
GR     23.2      1350.3        23.2      1351.8         23.4       1352.3        24.1
GR     23.7      1373.1        23.2      1374.1           23       1376.2        16.9
GR     16.5      1584.2        26.6      1601.9         26.9       1602.7          27
GR     28.5      1632.7        28.5      1633.9         26.9       1635.8        14.1
GR       12      1681.7        13.2      1688.1           18       1710.2          18
GR     22.7      1729.2        24.4      1733.9         29.9       1754.2        30.5
GR       31      1758.5          31        1762         31.1       1764.2        31.
GR     29.9      1774.1        31.5      1784.4           28       1787.6        27.9
GR       25      1803.4        23.3      1847.8         33.5       1869.8        33.5
GR     21.9      1903.1        21.5      1956.6         21.4       2024.8           0

X1    63950          56      1628.6      1872.4         15.6         14.6        14.6
   GDM 60948
X3       10
GR     21.5        1000          22      1075.4         22.4         1151        22.
GR       33      1299.2          33      1317.9         23.2       1345.6        23.
GR     24.1      1368.3        23.2      1370.2         23.2       1370.3        22.
GR       17      1560.9        17.4      1581.2         26.7       1599.2        27.
GR     26.8      1630.4        26.4      1631.7         26.7       1632.2        21.
GR       12      1683.2        15.3      1697.7         18.9       1706.4        18.
GR       19      1720.6        23.3      1736.5           27       1747.7        27.
GR       32        1762          32      1767.4         32.5       1768.1        31.
       30.6      1778.7        29.1      1784.8         30.5       1792.1        27.
       25.8      1802.6        24.3        1810         24.2       1810.2        24.
GR     23.2      1850.2        33.5      1872.4         33.5       1888.3        21.
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        21.4      2031.8           0           0           0           0           0

X1     64000          54      1632.2      1873.5        39.0        25.8        51.9
   GDM 61000
X3        10
GR      21.4        1000          22      1079.6        22.3        1144        22.8
GR        33      1298.7          33      1317.3        23.3      1344.6        23.3
GR      24.2        1349        24.2      1367.5        23.3      1369.3        22.2
GR        17      1576.4          17      1580.3        26.5      1597.1          27
GR        24      1638.1        22.3      1641.3          12      1658.6          12
GR      12.6        1698        15.2      1709.3        15.3      1709.5          22
GR      20.8      1743.3        20.5      1745.6        20.9      1750.2          21
GR      25.9      1763.7        26.2      1768.1        26.9      1773.9        27.3
GR      24.3      1792.5        24.2      1809.6          23      1811.8        22.3
GR      22.8      1818.9        22.4      1825.4        22.3      1830.3        21.9
GR      33.5      1891.9          22      1911.5        21.5      1966.2        21.3

X1     64200          65      1710.8      1890.5       148.1       127.2       100.0
   GDM 61100
X3        10
GR      21.6        1000          22      1052.7          22      1121.6          22
GR      22.7      1196.6          23      1254.7          23      1261.3        23.1
GR      33.1      1300.2        23.6      1326.5        23.5      1326.9        23.5
GR      24.5      1329.4        24.5      1347.8        24.2      1348.4        23.6
GR      23.2      1383.7        22.6        1434        18.5      1493.3        17.5
GR      24.8      1578.9          26        1642        26.8      1665.3        26.9
          28      1691.8        27.7      1694.9        27.5      1698.7        28.7
GR      25.9      1717.1        25.8      1717.3        25.4      1718.2        25.2
GR      15.2      1755.2          12      1768.7          12      1818.8          12
GR      17.6        1830        17.7      1830.1          21      1834.8          21
GR      21.1      1835.7        21.4      1836.8        23.6      1842.5        26.9
GR        27      1855.2        27.2        1856        31.6      1870.4        31.6
GR      33.3        1891        30.7      1892.2        23.2      1937.4          22

X1     64250          48      1765.2      1882.8       134.0       133.3       100.
   GDM 61200
X3        10
GR      21.6        1000          22      1051.9          22      1087.8        22.
GR        23      1241.7          23      1247.1        32.6      1264.9        33.
GR      23.3      1311.5        23.3      1311.7          24        1313        24.
GR      24.7      1333.3        23.6      1335.7        23.5      1336.1        23.
GR      22.9        1428        19.2      1494.6        18.5      1561.4        24.
GR        25      1684.6          28      1744.5        28.6      1754.6        28.
GR        29      1761.1          29      1765.2        21.4      1779.5          1
GR        19        1838        22.9      1844.4        27.7      1862.9        27.
GR      27.7      1880.4        31.5      1882.2        33.6      1882.8        33.
GR      22.3      1969.4        22.1      2020.7          22        2075

X1     64300          49      1721.9      1901.8       266.3       239.8       200.
   GDM 61400
X3        10
        21.9        1000          22      1052.6          22      1062.3        22.
GR      22.5        1164        22.9      1223.6        33.2      1242.3        33.
GR        24      1289.2        24.5      1290.2        25.1      1291.3        25.
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         24.1      1311.5        23.9      1314.3        18.8      1424.6        17.1
         25.3      1593.2          26      1650.4          26      1655.1        26.1
GR         28      1688.9        31.4      1713.4        31.6      1718.8        32.1
GR       31.7      1724.3          32      1724.6        30.4      1730.3        28.8
GR         13      1797.1        23.5      1818.7        26.5      1824.3        29.7
GR       33.5      1870.1        31.4      1877.2        28.5      1885.3        27.6
GR       33.8        1920          23        1938          23      1941.1        22.6

X1      64700          56      1702.7      1828.9       263.5       230.2        200.
   GDM 61600
X3         10
GR         22        1000          22      1016.6        22.7      1151.3          23
GR       33.2      1245.5        33.2      1263.7        23.9      1289.1        23.
GR         25      1294.1          25      1312.3        24.5      1313.3          24
GR       22.1      1478.3        18.3      1557.9        18.4      1559.3        23.
GR         25      1592.8        25.1      1594.2        25.2      1633.3        25.
GR       25.4      1652.2        25.4        1657          26      1669.8        27.
GR         28        1699          28      1702.7        13.3      1761.5          1
GR       16.7      1792.4        19.8      1796.2        21.6      1797.7        22.
GR       29.2      1817.3        33.9      1828.9        33.9      1851.2        31.
GR         27      1873.8        26.5      1876.9        23.9      1889.1          2
GR         23      2013.8        22.5      2058.4        22.9      2062.9        22.
GR         23        2075           0           0           0           0

X1      64715          51      1694.4      1824.4        20.8        17.9        14.
   GDM 61615
           10
           22        1000          22      1016.3        22.8      1176.8        23.
GR       33.2      1265.1        31.6      1267.2        23.8      1290.9        23.
GR       24.9      1295.6        24.9      1313.8        24.5      1314.7        23.
GR       22.4      1446.2        18.5      1557.1        18.4      1557.9        24.
GR       25.7      1603.4        25.7      1606.5        25.8      1607.5          2
GR         28      1691.9          28      1694.4        27.9      1695.2        15.
GR         13      1780.3        15.2      1783.4        17.9      1787.5        20.
GR       27.5      1803.7        32.9      1824.4          33      1824.5         3.
GR       33.9      1856.7        33.5      1857.6          33        1859        33.
GR       24.6      1881.2          23      1904.4        22.9      1972.3        22.
GR         23        2075           0           0           0           0

X1      65000          53      1626.7      1752.9       169.9       169.1        156.
   GDM 61771
X3         10
GR       22.1        1000        22.1      1048.2        22.9      1194.2        23.
GR       33.3      1270.9        33.3      1289.1        23.8      1315.4        23.
GR       24.9      1320.4        24.9      1338.6        23.9      1340.5        23.
GR       22.1      1403.4          19      1547.1        25.2      1560.4        27.
GR       27.5      1571.3        27.5      1572.1        27.6      1573.2          2
GR         29      1615.3        33.3      1626.7        20.2      1638.8        20.
GR         13      1655.3          13      1673.1        13.5        1675          1
GR       19.3      1706.7        22.6      1718.4        22.9      1719.7        22.
GR       26.7      1735.5        28.6      1741.3          29      1743.2        34.
           34      1792.2        27.7      1801.3        26.8      1803.8          2
         23.8      1931.3        23.5      2004.1        23.8        2075
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       65050          59      1596.8      1725.9        40.5        34.6        29.4
    GDM 61800
X3        10
GR      22.1        1000        22.1      1051.1        22.9      1202.4        23.3
GR      33.3      1273.5        33.3      1291.9        23.8      1318.3        23.8
GR      24.9      1341.8          24      1343.6        23.7      1346.1        22.9
GR        19        1546          25        1555          25      1557.7          29
GR      28.7      1597.6        28.6        1598        28.5      1598.2        28.1
GR      28.5      1612.2        22.4        1615        21.3      1618.4        17.7
GR        13      1641.4          13      1662.2        13.2      1662.7        17.1
GR      19.3      1678.8        19.3      1679.5        21.7      1689.5        22.9
GR      26.9        1710          28      1712.9        33.9      1721.5          34
GR      34.1      1764.4        34.1      1783.4          27      1793.7        26.9
GR      24.8      1870.9        24.7      1893.6        24.6      1894.8        24.2
GR        24      1944.1        23.8      2001.8          24      2055.2        23.8

X1     65050          52      1576.5      1739.3        66.1        55.9        50.0
    GDM 61850
X3        10
GR      22.1        1000        22.1      1053.6        22.1      1056.9        22.7
GR      33.3      1279.7        33.4      1298.5        23.9      1325.3        23.
GR      24.9      1330.7        24.9      1349.4        24.6      1349.9        24.
GR      23.8        1354        23.3      1409.3        22.7      1482.1        19.
GR      27.4      1562.8        27.5      1563.6        27.6      1564.2          2
GR      20.6      1591.2        21.1      1592.3        13.8      1603.5          1
          18      1640.3        18.3      1641.2        19.1      1643.2        19.
GR      24.8      1686.6          30      1715.7        35.3      1733.5        36.
GR      33.9      1752.4        34.2      1752.9        34.1      1756.6        33.
GR      34.1      1780.8          26      1793.1          25      1852.6        24.
GR        24      2025.4        23.4        2075           0           0

X1     65100          50      1575.5      1730.8        47.9        50.1        47.
    GDM 61900
X3        10
GR        22        1000          22      1062.9        22.3      1147.9           2
GR      33.4      1294.3        33.4      1313.1        23.8      1340.1        23.
GR      24.8      1345.5        24.8      1364.3        24.4      1365.3        23.
GR      23.4      1433.6        21.9      1490.1        19.2      1547.7        19.
GR      27.3      1565.2        25.6      1567.9        29.4      1575.5        14.
GR        13      1609.2          18      1623.1        23.4        1678        24.
GR      24.6        1688          27        1700        27.1      1700.4        30.
GR      33.8      1730.8        33.8      1744.7        34.4      1746.3           3
GR      34.1      1769.2        34.1      1787.5        25.6      1800.7           2
GR      24.3      1942.7        24.3      1954.2        24.2      1956.1           2

X1     65200          49      1558.0      1777.4         115          80         99.
    GDM 62000
X3        10
GR      21.9        1000        21.9        1051        21.9      1072.5           2
GR        23      1242.9        23.1      1252.7        23.8      1306.4        24.
        33.5      1341.8        24.6      1365.6        24.6      1367.9        25.
        25.9      1388.4        25.4      1389.5        24.6        1391        24.
GR      21.7      1470.8        19.8      1544.6        19.2      1548.3           2
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          21     1567.5        20.3     1568.7          13     1579.8          13
          18       1622        18.1     1622.5        24.3     1672.4          30
GR      29.9     1721.1        29.8     1721.4        28.5     1723.2        28.3
GR      34.2     1777.4        34.2     1795.5        31.7     1796.4        25.6
GR      24.8     1912.1        24.3     1963.2          24       2020        23.7

X1     65300         61      1577.4     1780.6        150.       100.        125.
   GDM 62125
X3        10
GR        22       1000          22     1063.7        22.2     1120.2        22.8
GR      24.6     1299.9        24.6       1301        33.5     1317.2        33.5
GR        25       1362        25.9     1363.8        25.9       1382        25.
GR      24.9     1400.2        19.2     1507.8        26.3     1515.5        26.5
GR        28     1547.1          32     1574.2          32     1574.9          32
GR      31.3     1581.7        31.3     1581.9        30.1     1588.7        29.6
GR      22.1     1603.3        19.3     1608.8          16     1616.8        14.
GR        13     1625.6          13     1648.8        16.7       1654          1
GR        20     1669.1          23     1678.9        23.5     1680.2          3
GR      34.5     1717.3        34.5     1724.2          35       1726          3
GR        27     1761.1        26.9     1764.5        32.2     1780.6        32.
GR      25.8     1828.4          25     1896.3        24.5     1962.3        24.
GR      23.7       2075           0          0           0          0

X1     65400         60      1617.4     1756.8        77.1       78.1        74.
   GDM 62200
X3        10
          22       1000          22     1052.2          22     1108.4           2
        24.5     1288.7        33.6     1305.1        33.6     1323.3           2
GR      25.9     1352.2        25.9     1370.4        25.1       1372         25.
GR      19.3       1512        25.8     1517.8          26     1555.2         26.
GR      26.4     1558.5        26.5     1560.3        26.5     1560.8         26.
GR      26.7     1562.3        26.8       1563        28.1     1583.2           3
GR        33     1610.5          33     1617.4        28.1     1630.1         18.
GR      18.1       1647        17.8     1647.7        17.7     1647.9           1
GR      14.4     1682.4        16.2     1686.2        19.4     1693.9         20.
GR      25.6     1712.8        28.1     1720.7        30.6     1731.9         30.
GR      29.1       1743        34.3     1749.9        35.1     1753.7           3
GR        35     1760.6        34.2     1778.5        34.3     1784.7         34.

X1     65500         50      1675.5     1786.1       181.4      183.3        175.
   GDM 62376
X3        10
GR        22       1000          22     1057.3          22     1065.4         22.
GR        24     1140.8          24     1191.8          24       1200         24.
GR      33.7       1295        24.8     1319.3        24.8     1323.6         25.
GR      25.4     1343.1        25.3     1343.2        24.9     1344.1         24.
GR      23.5     1481.9        19.5     1521.9        25.5     1529.1         25.
GR        26     1596.8        27.3     1614.3        27.4       1615
GR      27.6     1648.5        29.3     1650.2        30.7     1662.8
GR        29     1687.9        28.2     1689.5        23.3     1703.1         20
GR        13     1757.2        13.9       1758        19.6       1762
        34.4     1786.1        24.5     1787.1        34.4     1788.5         34
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       65600          50      1682.2      1792.4         30.4        27.3       24.2
    GDM 62400
X3        10
GR        22        1000          22      1053.9           22      1059.5       22.
GR        23        1080          23      1105.4           24      1170.8         24
GR      33.7      1274.3        33.7      1292.4         24.7      1316.8       24.
GR      25.4      1322.3        25.4      1340.5         24.9      1341.3       24.
GR      20.7      1454.8          20      1523.4         20.4      1524.8       25.
GR        26      1602.8          28      1627.6           28      1645.2       28.
GR        31      1671.3          31      1682.2         30.9      1683.2       21.
GR      17.1        1729        16.9      1729.3         16.8      1729.8         1
GR      15.4        1762        20.6      1769.3         26.7      1786.3       28.
GR      34.4      1794.9        34.4      1830.8         34.3      1830.9       34.

X1     65900          60      1685.6      1841.4          175         240      200.
    GDM 62600
X3        10
GR      22.6        1000          23        1052           23      1106.2          2
GR      23.6      1250.4        23.7        1251         33.8      1269.3        33.
GR      24.1      1315.7          25      1317.3         25.1      1317.6        25.
GR      24.3      1337.3        23.8      1386.6         23.3      1442.9        22.
GR      25.6      1569.3        25.6      1571.4           26      1633.8          2
GR      26.1      1636.6          27      1642.4           27      1648.4        28.
GR      30.1      1669.7        30.1      1685.6           30      1686.3        29.
GR      16.1        1730        15.7        1731           13      1739.5          1
          31      1799.2          34      1808.5         34.4      1812.5        35.
          34      1824.7        34.1      1825.9         32.8      1829.3          3
GR      31.7      1838.9        32.5      1841.4         32.5      1859.4        32.
GR        25      1910.3        24.1      1942.5           24        1943        24.

X1     66100          50      1687.7      1797.8        200.4       220.9        200
    GDM 62800
X3        10
GR      22.3        1000        22.8      1073.2           23      1123.2          2
GR      24.2      1249.9        24.1      1251.2         24.3      1263.9        24.
GR      33.9      1282.5        33.9      1300.6         24.5      1325.8        24.
GR      25.9      1329.1        25.9      1347.1           25      1348.9        24.
GR      24.4      1370.4        19.7      1582.5         25.8      1593.1          2
GR      28.6      1662.1        29.6      1670.4           29      1678.5        30.
GR      27.7      1697.4          23        1704         22.2      1705.2        16.
GR      15.2      1722.8          13      1729.7           13      1735.5        25.
GR      34.6      1797.8        34.6      1819.4         34.6      1851.9        25.
GR        25      1872.5          25      1927.5         24.8      1999.1        24.

X1     66400          55      1721.2      1847.0        255.8       228.1        200
    GDM 63000
X3        10
GR        23      1204.9          24      1255.3         24.1      1273.5         33
GR      24.6      1334.4        24.6      1338.8         25.2        1340         25
GR      24.7      1359.2        24.9      1361.7         24.7      1384.1         19
          26      1586.5          26      1637.1           26      1652.9         27
        27.8      1666.5        27.9      1667.3         27.7        1674         29
GR        32      1709.9          32      1720.7         32.1      1721.2
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          25.5    1743.3      24.3    1746.2      24.1    1746.8      23.9
          15.8    1769.8      15.4    1770.7        14    1774.6      13.6
GR          13    1809.7        21    1818.8      27.9    1832.9        28
GR        34.2    1844.6      34.6    1845.5      35.1      1847      34.8
GR        34.8    1893.3      26.5    1906.2      26.5    1906.3      26.6

X1       66700        48    1730.5    1897.3     257.8     230.2     200.0
   GDM   63200
X3          10
GR          22      1000      22.2    1051.1      22.6      1142        23
GR        24.2    1276.1        34    1293.7        34    1311.7      24.5
GR        25.4    1341.2      25.4    1359.2      24.6    1360.8      24.9
GR        23.3    1519.8      22.9    1558.4      25.3    1565.6      25.9
GR        27.5    1689.9      29.8    1711.5      30.4    1713.8        32
GR          32    1730.5      27.7    1752.5        13    1798.2        13
GR        35.6    1856.5        37      1868        37    1869.2        37
GR        34.8      1882      34.7    1882.3      34.5    1883.3        34
GR        32.9    1897.3      32.9    1915.4      25.1    1931.2        25
GR          27    2020.1        27    2051.4        26      2075         0

X1       66900        50    1651.9    1859.6     190.0     200.0     200.0
   GDM   63400
X3          10
GR        21.9      1000      22.1      1056      22.1    1061.9      22.8
GR        24.1    1264.7      34.1      1283      34.1    1301.3      24.
GR        25.8    1333.1      25.8    1351.4      24.9    1353.2      24.6
          20.5    1521.3        20      1538      24.9    1543.5      25.
            28    1621.2      30.2    1629.3      30.3    1629.6      33.
GR          34    1643.8        34    1651.9      29.8    1667.9      24.4
GR          13    1693.7        13    1720.7      14.3    1722.2        16
GR        25.8    1788.4      27.3    1790.8      27.8    1791.3      28.
GR        33.4    1809.1      37.9    1810.5        38    1812.1        38
GR        28.5    1845.5      33.1    1859.6      33.1    1877.8      25.

X1       67300        34    1541.4    1774.2       196       200       19
   GDM   63600
X3          10
GR          21      1000        21    1003.3      21.1    1004.5        2
GR          21    1163.7        35    1178.4        35    1198.4      32.
GR          21    1237.6        22    1239.6        22    1257.6      21.
GR          21    1261.4      16.3    1385.2      16.3      1469      22.
GR          36    1541.4        15    1586.4        15    1656.4      36.
GR        36.5      1703        27    1738.2        27    1758.2        3
GR        22.4    1810.4      21.9    1881.5      21.4    1931.6      21.

X1       67500        47      1565    1852.3       196       200        19
   GDM   63800
X3          10
GR          21      1000      21.6    1056.6      21.7    1106.8      21.
GR          22    1231.6      32.8    1251.4      34.8    1254.3      34.
GR        22.2    1304.9      22.4    1305.4      23.1    1306.8      23.
          21.9    1328.2      21.4    1380.4        21    1433.5      16.
            34      1545        34      1565        26      1581      14.
GR          15    1657.5        17    1669.1      22.6    1684.1         2
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GR     25.4    1691.5       25.8     1692.5       25.9      1693      27.3
GR       28      1705         28       1710         28      1750      25.5
GR     33.5    1849.7       34.8     1852.3       34.8    1872.3      21.9
GR     21.6    1963.6       21.5     2018.6          0         0         0

X1    67700        32     1629.3     1975.1        150       200       175
   GDM 64000
X3       10
GR     21.4      1000         22     1079.6       22.3      1144      22.8
GR     34.9    1293.5       34.9     1313.5         33    1317.3      23.3
GR     23.8    1348.1       24.2       1349       24.2    1367.5      23.3
GR     17.5    1518.7         17     1576.4         17    1580.3        34
GR       15    1649.3         15     1669.3         30    1714.3        30
GR       38    1799.3         27     1839.3         27    1959.3      34.9
GR     21.5    2021.9       21.3     2059.7          0         0         0

X1    67850        51     1450.3     1891.6         95       155       130
   GDM 64130
X3       10
GR       36    1445.6         36     1446.6         36    1450.3      35.1
GR       24      1484       21.7     1487.4       20.3    1489.3      19.9
GR       15    1496.3         15     1515.2       16.3    1523.4      16.3
GR     16.5    1525.5         17     1528.9         17    1529.1      17.2
GR     22.8    1542.8       28.8     1556.6       29.1    1557.2      29.2
GR       31    1561.2         31     1581.2       30.6    1585.4      30.6
GR     29.3    1593.5         29     1595.5         29    1596.2      33.4
         40    1640.5       39.8     1640.9       40.9    1643.5      36.9
GR     35.5    1651.3       35.3     1651.9       35.2    1652.1      35.
GR     34.5    1653.7         28     1668.7         27      1677      26.4
GR       35    1911.6          0          0          0         0         0

X1    68000        55    1402.1      1931.2        205       220       210
   GDM 64350
X3       10
GR       27    1357.2         28     1364.3       28.2    1364.8        3
GR       37    1388.5         37     1402.1       34.8    1417.7      33.
GR     32.2    1421.3         32     1421.5       31.6    1422.3      27.
GR     18.8    1444.3         15     1451.4         15    1457.2      15.
GR     15.6    1468.9       15.8     1472.3       15.8    1473.1      15.
GR       17    1478.3       17.1     1478.5       17.3    1479.2        2
GR       23    1510.3       26.7     1528.9         28    1534.2      31.
GR       33    1549.5         39     1559.3       39.9    1564.1        4
GR     40.3    1584.8       38.3     1589.5       30.2    1616.5      27.
GR     26.9      1682       26.5     1806.3       26.7    1876.1      26.
GR     33.8    1927.6         35     1931.2         35    1951.2      27.

X1    68100        52     1387.3     1968.1        110       105       10
   GDM 64456
X3       10
GR       26    1326.1       26.9       1346       27.1    1347.9      34.
GR     36.5      1387       36.5     1387.3       36.4    1388.1        3
       33.2    1398.8       25.5     1408.7       16.4    1421.1        1
       18.9    1451.6       20.6       1455       20.6    1455.2      21.
GR     23.6    1469.7         26     1494.7         26    1495.1        3
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          33.2      1533.2         33.3      1533.6          33.4      1533.8         34
            40      1552.7           40      1564.7          40.8      1571.5       34.2
GR          27      1604.4         26.7      1663.3          26.4      1728.3       26.4
GR        26.8      1904.6         26.9      1904.6            27        1905       27.1
GR        26.9      1941.2           34      1964.2          35.3      1968.1       35.3
GR          27      2023.6         27.5      2029.3             0           0          0

X1       68400          47       1376.1      1998.5            80         195        160
   GDM 64600
X3          10
GR        34.2      1096.1         34.2        1098          26.6      1098.1         24
GR        25.2      1119.9         24.8      1120.5          24.3      1121.7       24.7
GR        22.9      1310.7           26      1320.1            26      1321.2         29
GR        30.3      1342.9         35.9      1355.8            36      1356.1         36
GR          16      1420.5           16      1430.5            16      1444.8         18
GR        19.1      1465.9         19.1      1466.2          19.3      1468.4       19.4
GR        23.4      1502.2         34.1      1519.4            40      1530.4         40
GR          27      1577.6           27        1642            27      1697.3       26.8
GR          27      1898.7           27      1938.1            27      1966.6         27
GR        35.4      2018.5           27      2043.7             0           0          0

X1       68700          42       1341.9      2057.5           160         230        200
   GDM 64800
X3          10
GR        32.4      1314.4           36      1329.6            36      1339.9         36
GR        19.5        1368           16      1373.8            16      1407.7       19.3
          27.2      1463.5         29.6        1484            30      1486.4         31
          39.5      1534.8         39.8      1542.4          39.3      1545.4       39.3
GR        39.2      1550.4         39.1      1550.9          36.6        1559       36.2
GR        34.7      1565.6         30.6      1576.9          29.9      1579.2       29.9
GR        27.8        1639         27.6      1689.9          27.4      1737.1       27.2
GR        27.4      1895.4         27.7      1945.8            28      2033.5         36
GR          28      2101.5           28      2121.5             0           0          0

X1       69000          61       1398.4      2051.7            75         260        240
   GDM 65000
X3          10
GR          39      1398.4         26.2      1412.6          23.3      1415.4       20.
GR          16      1423.5           16      1458.8          16.4      1460.4       18.
GR        18.6      1479.8         18.7      1480.6          19.5      1492.2         2
GR        22.8      1537.8         23.5      1552.4          23.7      1597.1       24.
GR        25.2      1615.7         26.4      1625.5          27.8        1633       29.
GR        31.7      1663.7           36      1677.4          39.7      1709.1       39.
GR          40      1744.6           40      1749.9          39.7        1752         3
GR        39.5      1834.5         39.5      1834.9          38.7      1841.1       38.
GR        38.1      1849.1         38.1        1851          37.9      1855.8       37.
GR        37.7      1876.6         35.8      1904.5          34.6      1911.9       31.
GR        30.5      1948.1         30.2      1950.7          30.2      1955.8         2
GR        28.8      2022.9         28.6      2029.3            34      2045.7         3
GR          26      2101.7            0           0             0           0
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      69400           .63      1583.6      2067.5         125         290         180
   GDM 65200
X3        10
GR      30.6       1104.1        35.1      1104.5        35.2      1121.7        35.2
GR      26.4       1149.3        26.4      1152.3          27      1153.5        27.4
GR      26.4       1175.1        26.1      1177.5        25.6      1233.3        25.5
GR      24.4       1385.7        26.9      1393.3          27      1407.3        27.9
GR      28.7       1501.3        28.7      1502.4        28.7      1517.8        29.7
GR        39       1567.9          39      1574.7          39      1583.6        38.5
GR      35.9       1596.1        32.5      1603.3          31        1607          30
GR        28       1744.3        22.1        1760        20.5      1763.7          16
GR      18.2         1807        26.4        1817        26.6      1817.8          28
GR        32       1910.7        31.4      1917.6        31.3      1919.8        31.2
GR        31       1936.1          32      1943.4        33.5      1950.9        38.9
GR        39       1981.4        37.4      1994.2        36.5      1999.1          33
GR      36.3       2067.5        36.3      2087.5        31.3      2102.5           0

X1     69600           18      1595.2      2060.6         110         220         150
   GDM 65400
X3        10
GR        39       1595.2        37.3      1601.7        34.3      1611.7        34.3
GR      34.1       1612.6          31        1623        22.3      1641.8        21.
GR        17       1656.2          16      1675.5          37      1855.5          37
GR        30       2040.5        36.7      2060.6        36.7      2080.6

      69800            53      1558.0      1986.1         200         200         20
   GDM 65600
X3        10
GR      28.6       1172.8        28.6      1184.4        35.6      1198.7        35.
GR      28.3       1241.8        29.3        1244        29.6      1244.5        29.
GR      28.2       1265.6        28.2      1267.8        28.6      1268.3        27.
GR      26.8       1470.8          29      1477.6          29      1500.2          3
GR      34.6       1540.1          37      1544.8        39.3      1548.6          4
GR        41       1556.4        41.5        1558          40      1559.9          3
GR      16.2       1616.6          20      1637.7        33.3      1683.7        40.
GR        41       1717.6        41.1      1717.9        40.4      1719.1        34.
GR      31.6       1741.4        31.4        1742          29      1747.6          2
GR        30       1816.7          30      1867.3        29.9        1925          3
GR      36.9       1986.1        36.9      2006.1        26.9      2036.1

X1     69900           55      1563.4      1919.4         250         200         22
   GDM 65800
X3        10
GR      29.5         1000        29.9      1085.9        29.6      1139.4        29.
GR      35.9       1226.4        35.9      1244.4        29.6      1263.3        29.
GR      31.2       1268.2        31.2      1286.2        29.8      1288.9        29.
GR      28.6       1401.4        27.7      1492.8        30.2      1500.6          3
GR      35.7       1544.7        35.7      1545.3        36.3      1546.4        36.
GR        42         1560          42      1563.4          36      1577.4        30.
GR        19       1602.3        16.4      1622.4          21      1658.4        22.
        27.6       1693.5        28.7      1696.1        36.3      1712.1           4
        37.3       1730.3          33      1741.6        30.1      1756.6           3
GR        30       1892.2        29.9      1897.8        37.1      1919.4        37.
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   17JUL95       11:48:03


          29    1995.3      28.7    2056.6        28.7     2064.8       28.6

X1     70100        38    1609.8    1917.5         225        215        220
   GDM 66000
X3        10
GR      29.6      1000      29.6    1059.9          30       1143         30
GR        36      1234      30.3    1251.6        30.3     1252.9       31.5
GR      31.7    1274.1        31    1275.5        30.5     1276.6       30.6
GR      29.4    1394.3      28.5    1479.4        31.4     1488.2       31.5
GR      32.9    1560.3      32.9    1560.7          33     1561.6       33.1
GR      39.4    1578.1        42    1584.3          42     1609.8         19
GR        41    1769.8        41    1774.8          32       1797         30
GR      37.5    1917.5      37.5    1937.5        27.5     1967.5          0

X1     70200        13    1676.9    1962.3         260        220        230
   GDM 66200
X3        10
GR      33.1    1626.9      35.8    1643.1          40     1661.9         40
GR        19    1771.9        43    1811.9          43     1826.9         33
GR      38.3    1962.3      38.3    1982.3        28.3     2012.3          0

X1     70400        59    1667.4    1952.7         245        220        235
   GDM 66400
X3        10
GR        30      1000        30    1050.9          30     1102.5       30.
GR      36.3    1181.9      36.3    1200.1        30.8     1217.1       30.
        31.2    1239.3      30.9    1239.9        30.3     1243.3       29.
        31.9    1455.1        32      1506          32     1559.4       32.
GR      33.8    1620.3        34    1623.4        35.6     1633.1        3
GR      42.9    1664.5      43.3    1667.4        43.2     1667.5        3
GR      27.9    1724.6        19    1737.6          19     1767.6       22.
GR      24.4    1779.6      24.5    1779.9        24.6     1780.1       25.
GR      33.2    1795.9        34      1808        34.1     1808.7       34.
GR        42    1831.9      42.1    1836.8        33.1     1869.4       32.
GR      38.3    1952.7      38.3    1972.7          32     1985.3        3
GR        32    2019.5      32.3    2036.1        32.4     2037.2        3

X1     70600        41    1594.0    1955.4         260        220        24
   GDM 66600
X3        10
GR      33.1    1567.1      34.7    1576.7        35.7       1579       36.
GR      37.8    1592.2      38.1    1593.6        38.1       1594         3
GR      37.4    1605.8      37.3    1607.1        36.9       1610       36.
GR      36.6      1611      36.6    1611.2          36     1613.6       35.
GR      34.8    1625.1      34.7    1625.5        34.7     1626.8         3
GR      32.3    1647.8      25.3    1665.8        24.9     1666.7         1
GR        45    1800.8        45    1810.8          34     1842.8         3
GR      38.3    1955.4      38.4    1955.6        38.4     1975.2       38.
GR        33      2023         0         0           0          0
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 17JUL95        11:48:03


       70800          58      1572.2      1895.6         290         200         250
   GDM 66800
X3        10
GR      30.2        1000        30.2        1000        30.3      1027.7        30.6
GR      36.6      1161.7        36.6      1179.7          31      1196.7          31
GR      32.4      1200.9        32.4        1219        31.4      1221.1        30.5
GR      29.1      1366.7        28.4        1438        28.2      1456.1        32.2
GR        35      1531.4        41.8      1562.2        41.9      1562.8          42
GR      42.1      1572.2          40      1577.9          36      1598.9        35.6
GR        19      1641.1          19      1666.1          24      1687.8          28
GR      28.7        1700          31      1706.1        31.1      1707.7        31.1
GR      32.2      1724.8        36.1      1737.3        36.8      1739.2        42.4
GR      42.6      1761.5        41.1      1765.7        34.5      1793.4          34
GR      38.4      1895.6        38.6        1896        38.6        1916        38.4
GR      32.2      1971.6        32.4      2031.1          32        2075

X1     71000          54      1563.8        1881         235         200         22
   GDM 67000
X3        10
GR      30.7        1000          31      1062.8        31.2      1128.9        31.
GR      36.8      1199.6        32.3      1213.5          32      1214.6          3
GR      32.2      1217.1        32.5      1218.1          33        1219        33.
GR      30.5      1498.6        33.5      1507.3          34      1541.8        38.
GR      41.5      1562.9        41.7      1563.6        41.7      1563.8        38.
GR      38.1      1570.1        31.8      1579.9        23.6      1594.2          2
          19        1626          26      1648.3        26.5      1649.8        27.
        39.7      1704.6        40.6      1707.3        40.8      1707.7        43.
GR      44.5      1723.1        42.2        1724        42.1      1724.5          4
GR      34.2      1745.8          34      1745.8          34      1870.8        39.
GR      33.6        1912          33      1980.7          33      1982.6          3

X1     71200          55      1557.4      1882.7         205         200        202.
   GDM 67200
X3        10
GR      31.2        1000          31      1003.5          31      1054.7        31.
GR      31.9      1197.3        31.9      1219.2        36.9      1229.5        36.
GR      32.5      1264.3        33.1      1265.4        33.1      1284.1        32.
GR        32      1286.2        31.3      1288.4        30.8      1343.2        30.
GR      29.4      1494.6        33.4      1507.2          34      1535.1        33.
GR      35.8      1552.1        35.9      1552.4          36      1553.5          3
GR      19.1        1605        26.8      1634.2        26.9      1635.3          2
GR      32.9      1646.3        33.6      1649.2        35.5        1660          3
GR        43      1682.3          43      1685.9        40.8      1693.4          4
GR      33.7      1716.5        33.7      1871.5        39.3      1882.7        39.
GR      33.2      1943.7        33.3      1953.2        33.4      2008.6        33.

X1     71400          52      1577.5      1897.9         135         200          1
   GDM 67400
X3        10
GR      30.9        1000        30.9      1067.4          31      1133.5        31.
        37.1        1272        37.1      1290.1          32      1305.7        32
        33.2      1325.6        32.1      1327.8        31.9        1330
GR      29.9      1530.3        38.4        1556        38.2      1561.9        38
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   17JUL95        11:48:03


       38.9      1569.3        38.9      1574.6          39      1575.6          39
       35.8      1583.9        35.6      1584.2        34.3      1586.7        33.6
GR     19.2        1652        35.4        1682        37.5        1692        41.6
GR       43      1713.1        40.2      1724.8        40.2      1725.1        40.1
GR       40      1725.7        38.2      1741.2          35      1748.9        34.8
GR       34      1766.9          34      1886.9        39.5      1897.9        39.5
GR     34.2      2005.9        34.2      2058.4           0           0           0

X1    71600          56      1601.1      1905.9         115         200         165
   GDM 67600
X3       10
GR     31.1        1000        31.9      1071.6          32      1122.2          32
GR     32.3      1251.4        37.4      1261.7        37.4      1279.8        32.5
GR     33.4      1296.9        33.4        1315        32.6      1316.6        32.6
GR       32      1365.7        31.4      1424.6        31.1      1450.9        30.6
GR     33.9      1530.4          34      1543.5        35.2      1575.7          39
GR       39      1601.1        19.3      1647.7        19.3      1687.7        21.8
GR     35.9      1726.5          36      1726.7          36      1726.8        36.1
GR     41.6      1740.7        41.7      1741.4        41.8      1749.2        41.7
GR     41.6      1752.8        41.5      1753.3        43.5      1761.5        39.
GR       36      1778.1          35      1783.9        34.4      1791.8        34.4
GR     34.3      1895.1        39.7      1905.9        39.7      1925.9        34.5
GR     34.4        2075           0           0           0           0

X1    71900          64      1609.3      1883.5         215         205         21
   GDM 67800
         10
       32.9        1235        33.3      1235.9        37.5      1244.2        37.5
GR     33.2      1276.9        33.7        1278        33.7        1296        32.9
GR     31.9      1402.4        30.9      1498.9        32.5      1503.9          3
GR       35      1561.6          37      1588.4        38.6      1598.5        38.
GR     39.4      1602.2        39.4      1602.7        39.5      1602.8        40.5
GR     40.5        1613        40.3      1614.2        40.3      1614.5        40.
GR       38      1630.8        35.5      1650.8          29      1664.5        27.
GR     23.3      1694.5        19.5        1705        19.5        1740        19.
GR       20      1741.5        20.3        1742        32.9        1757        33.
GR     35.3      1760.3        35.5      1760.5          42      1768.7        42.
GR     42.1        1778        42.7      1779.6        43.5      1783.4          4
GR     41.2      1792.9        39.2      1797.6          39        1798        38.
GR       35      1873.5          40      1883.5          40      1903.5          3

X1    72000          49      1620.6      1902.2         245         205          22
   GDM 68000
X3       10
GR     31.6        1000        31.3      1004.6        31.3      1026.9           3
GR       32      1042.4          33      1097.4        33.2      1151.3         33.
GR     37.6      1249.6        37.6      1267.7        34.1      1278.6         35.
GR     34.7      1299.7        34.2      1300.7          34      1303.5         33.
GR     32.2      1504.7        35.6      1514.9        35.9      1587.3           3
GR       41      1618.7          41      1620.6        19.6      1670.6         19.
GR       36        1746          38      1748.8          43      1767.7         43.
         44      1780.1          44      1780.4        43.8        1781         43.
         35      1806.6          35      1891.6        40.3      1902.2         40.
GR       36      1950.8        36.3      2013.5          36      2068.2         35.
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   17JUL95       11:48:03


      72200          64    1616.6    1860.6        245        210       225
   GDM 68200
X3       10
GR     32.4        1000      32.3    1006.2         33     1014.4        33
GR     33.5      1131.4        34      1202       34.1     1250.7      34.2
GR     37.8      1276.4      37.8    1294.8       34.7     1304.5      34.7
GR       36      1308.9        36    1327.2       35.2     1328.8        35
GR     34.9      1391.8      34.1    1482.1       33.7     1530.8      36.7
GR       38      1594.8        39    1605.2         39     1605.8      39.1
GR       40      1616.3        40    1616.6       39.9     1616.8      38.7
GR     38.4      1630.1      35.6    1635.1       24.8       1657        24
GR     19.9      1666.6      19.8    1668.4       19.8     1693.4      21.9
GR     33.9      1721.9      36.2    1728.3         39     1734.9        44
GR       44      1763.7        40      1776         36     1793.5      35.1
GR     40.6      1880.6      34.4      1893       34.1     1945.4        34
GR     33.1      2057.4        33    2068.2       34.7     2073.1      35.5

X1    72500          57    1637.7    1840.8        225        205       215
   GDM 68400
X3       10
GR     37.9        1311      37.9    1329.3       36.2     1334.4      36.
GR     37.4      1339.3      37.4    1357.7       36.4     1359.6      36.
GR     35.2      1468.4      34.5    1541.7       34.4     1546.4      34.
GR     38.6      1598.5      38.5    1599.9       38.7     1609.4      38.
GR     38.6      1628.4      38.5    1633.8       38.6     1635.4      38.
       36.4      1642.8      36.3    1643.5       29.6       1653      29.
       19.9      1666.1      19.9    1669.5       19.9     1689.5      20.
GR     30.6      1723.5      33.7      1731       34.6     1735.3       3
GR       42      1772.8        42    1778.5         42     1789.5      36.
GR       41      1840.8        41    1860.8       35.1     1872.6      34.
GR       34      2008.9        34    2036.9       36.6     2056.1       3
GR       34      2074.9        34      2075          0          0

X1    72700          40    1674.6    1837.6        205        205       20
  GDM 68600
X3        1   0
GR       34        1000      34.6    1059.4         35     1122.9      35.
GR     36.6      1294.8      38.1    1297.8       38.1     1315.8      37.
GR     26.6      1368.3        25    1563.3         40     1626.5       4
GR       19      1691.7        19    1697.5       20.8     1700.4      20.
GR     22.5      1717.8        24    1727.6         24     1727.9      24.
GR     29.1      1739.3      36.4    1745.4       36.4     1746.9       4
GR       40      1791.6      37.5    1797.3       36.8     1802.3      36.
GR     41.2      1837.6      41.2    1857.6       35.8     1868.4       3
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   17JUL95      11:48:03



 **************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 **************************************


 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY


  COY3CH.DAT (NATURAL CHA

 SUMMARY PRINTOUT


        SECNO       CWSEL      RBEL      XLBEL       VCH        Q         EG      K*XNC
    62800.000       27.68     30.90      29.00      2.75    3350.00     27.80       55.
    62900.000       27.79     31.00      27.00      2.58    3350.00     27.89       55.
    63000.000       27.86     31.10      27.00      2.64    3350.00     27.97       55.
    63050.000       27.86     33.10      27.00      2.85    3350.00     27.98       55.
    63200.000       27.97     33.20      30.60      2.99    3350.00     28.11       55
    63400.000       28.13     33.30      28.00      2.44    3350.00     28.22       55
    63600.000       28.22     33.40      26.00      2.25    3350.00     28.30       55
    63800.000       28.32     33.50      26.00      2.17    3350.00     28.39       55
    63850.000       28.33     33.50      26.00      2.05    3350.00     28.40       55
    63900.000       28.37     33.50      28.50      2.32    3350.00     28.46       55
    63950.000       28.39     33.50      27.90      2.16    3350.00     28.46       55
    64000.000       28.43     33.50      27.00      1.80    3350.00     28.48       55
    64200.000       28.45     33.60      28.70      2.06    3350.00     28.51       55
 *  64250.000       28.41     33.60      29.00      3.39    3350.00     28.59       55
    64300.000       28.59     33.80      32.10      3.46    3350.00     28.77       55
    64700.000       28.79     33.90      28.00      3.15    3350.00     28.94       55
    64715.000       28.81     32.90      28.00      3.07    3350.00     28.96       55
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    SECNO       CWSEL      RBEL      XLBEL      VCH        Q        EG     K*XNC
  65000.000     28.92     34.10     33.30      3.03   3350.00     29.06     55.
  65050.000     28.93     34.10     29.00      3.21   3350.00     29.09     55.
  65050.000     28.99     37.00     29.00      2.97   3350.00     29.13     55.
  65100.000     29.04     33.80     29.40      2.78   3350.00     29.16     55.
  65200.000     29.13     34.20     27.00      2.50   3350.00     29.23     55.
  65300.000     29.18     32.20     32.00      3.16   3350.00     29.33     55.
  65400.000     29.22     35.00     33.00      3.52   3350.00     29.41     55.
  65500.000     29.38     34.40     31.00      3.43   3350.00     29.57     55.
  65600.000     29.40     34.40     31.00      3.57   3350.00     29.59     55.
  65900.000     29.61     32.50     30.10      3.15   3350.00     29.76     55.
  66100.000     29.73     34.60     31.00      3.68   3350.00     29.94     55.
  66400.000     29.96     35.10     32.10      2.93   3350.00     30.09     55
  66700.000     30.06     32.90     32.00      3.76   3350.00     30.27     55
* 66900.000     30.32     33.10     34.00      2.14   3350.00     30.39     55
  67300.000     30.38     35.00     36.00      2.05   3350.00     30.45     55
  67500.000     30.46     34.80     34.00      1.72   3350.00     30.51     55
* 67700.000     30.51     34.90     34.00      2.64   3350.00     30.62     55
* 67850.000     30.67     35.00     36.00      1.96   3350.00     30.73     55
  68000.000     30.79     35.00     37.00      1.48   3350.00     30.82     55
  68100.000     30.82     35.30     36.50      1.38   3350.00     30.85     55
  68400.000     30.87     35.40     36.00      1.17   3350.00     30.89     55
  68700.000     30.92     36.00     36.00      1.21   3350.00     30.94     55
  69000.000     30.97     36.00     39.00      1.41   3350.00     31.01     55
* 69400.000     30.96     36.30     39.00      3.39   3350.00     31.14     55
* 69600.000     31.25     36.70     39.00      2.01   3350.00     31.31     55
  69800.000     31.40     36.90     41.50      2.80   3350.00     31.52     55
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17JUL95      11:48:03

    SECNO        CWSEL      RBEL      XLBEL       VCH         Q          EG      K*XNC

*  69900.000     31.72     37.10     42.00       2.41     3350.00     31.81      55.
   70100.000     31.93     37.50     42.00       2.91     3350.00     32.06      55.
   70200.000     32.21     38.30     40.00       3.85     3350.00     32.44      55.
   70400.000     32.63     38.30     43.30       4.47     3350.00     32.94      55.
   70600.000     33.23     38.30     38.10       2.85     3350.00     33.36      55.
   70800.000     33.55     38.40     42.10       3.57     3350.00     33.75      55.
   71000.000     33.84     39.10     41.70       3.62     3350.00     34.04      55.
*  71200.000     34.19     39.30     36.00       3.52     3350.00     34.38      55.
   71400.000     34.59     39.50     39.00       2.99     3350.00     34.73      55.
   71600.000     34.82     39.70     39.00       2.52     3350.00     34.92      55.
   71900.000     34.94     40.00     40.60       2.95     3350.00     35.07      55
   72000.000     35.12     40.30     41.00       2.80     3350.00     35.24      55
   72200.000     35.29     40.60     40.00       3.53     3350.00     35.48      55
   72500.000     35.50     41.00     39.10       3.62     3350.00     35.70      55
   72700.000     35.66     41.20     40.00       4.44     3350.00     35.97      55
   17JUL95       11:47:34



*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
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T1              9/18/90  COYOTE CREEK GDM
T2                "SPLIT" FLOW - BYPASS
T3        COY3BP.DAT (BYPASS CHANNEL - SPLIT FLOW)

J1   ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q

        0          2

J2   NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW

       1          0         -1          0          0          0         -1          0


J3   VARIABLE CODES FOR SUMMARY PRINTOUT

      38          1         24         23         26         43          3

J3   LPRNT     NUMSEC                    ********REQUESTED SECTION NUMBERS*******

     -10        -10

NC      .035       .035       .035         .1         .3
QT         1       9050
X1     62800         35     1151.9     1647.1          0          0
  GDM 59600
X3        10
GR      17.4       1000       17.3     1000.5         17     1058.7       17.
GR      32.8     1141.1       32.8     1151.9       15.4     1194.1       15.
GR        18     1526.1       13.6     1574.1         19     1589.1         2
GR        22     1637.1         29     1647.1         29     1660.1
GR        22     1762.1       32.5       1777       32.5     1795.1       26.
GR      24.4     1811.1       24.3     1811.7       24.3     1811.9       23.
GR        22     1827.2       21.8     1872.2       21.3     1925.4         2

X1     62900         21     1168.4     1596.4      157.2      183.1      200.
  GDM 59800
X3        10
GR      18.7       1000       19.2     1003.3       19.4     1056.4       19.
GR      33.1     1150.4       33.1     1168.4       15.4     1203.4       15.
GR        19     1506.4         19     1558.4         20     1566.4         2
GR        26     1611.4          8     1629.4          8     1665.4         2
        32.6     1732.4          0          0          0          0
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X       63000        47      1179.9      1603.2      250.7      145.0      190.0
  GDM 59981
X3         10
GR         20      1000          20      1052.4         20     1107.3         20
GR       31.4    1161.9        31.4      1179.9         18     1220.1         18
GR       16.7    1241.8        16.7      1521.8         21     1531.7         21
GR         23    1576.1        23.3      1578.3       23.3     1579.3         27
GR       25.8    1618.2        21.8      1625.2       21.4     1626.4       20.8
GR         10    1637.6          10      1677.4       10.1     1677.7       12.3
GR       26.8    1713.4        26.9      1713.7       26.9     1715.7       24.5
GR       31.1    1728.2        31.1      1746.2         25     1758.3         25
GR       22.8    1768.1        22.7      1768.5       22.6     1769.5       22.6
GR       21.8    1777.5        21.5      1782.1          0          0          0

X1      63010        19      1181.1      1576.1         19         19       19.0
  GDM 60000
X3         10
GR         20      1000          20      1118.3         20     1140.3       33.1
GR         16    1226.1          14      1474.1         20     1489.1         20
GR         22    1568.1          27      1576.1         27     1588.1          8
GR         25    1694.1          27      1706.1       32.6     1724.1       32.6

X1      63200        23      1197.4      1600.0      200.1      200.1       200.
  GDM 60200
X          10
         20.1      1000          20        1052       20.4     1123.7         20
G        19.7    1155.8        33.1      1179.4       33.1     1197.4       20.7
GR       15.4    1462.4        15.4      1479.4         27     1542.4         27
GR         28      1600          28      1607.4          8     1636.4          8
GR         30    1750.4        32.7      1776.4       32.7     1796.4          0

X1      63400        21      1203.8      1557.8      200.2      200.8      200.0
  GDM 60400
X3          1    0
GR       20.6      1000        20.8      1054.3         21     1130.3         21
GR       33.2    1185.8        33.2      1203.8       20.7     1231.8       20.7
GR       16.4    1460.8          26      1527.8         26     1539.8         27
GR          8    1632.8           8      1670.8         28     1714.8         28
GR       32.9    1798.8           0           0          0          0

X1      63600        26      1218.1      1554.0      200.4      201.6      200.0
  GDM 60600
X3         10
GR         21      1000          21      1003.3       21.1     1004.5          2
GR         21    1163.7          21      1178.7       33.4     1200.1        33.
GR       20.9      1272        17.5        1466       17.5       1478          2
GR         25      1554          25        1559          8       1629
GR         31      1756          33        1786       22.4     1810.4        21.
GR       21.5    1991.8           0           0          0          0
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       63800          23     1304.2     1578.2        205.9       208.0       200.0
  GDM 60800
X3        10
GR      21.6    1056.6       21.7     1124.6           22      1194.6          22
GR      33.5    1286.2       33.5     1304.2           21      1344.3          21
GR      18.6    1537.3         22     1552.3           22      1562.3          25
GR         8    1611.3          8     1647.3           32      1723.3          32
GR        33    1860.7       31.5       1866           22      1883.5           0

X1     64000          25     1328.1     1592.0          240          25         200
  GDM 61000
X3        10
GR      21.4      1000         22     1079.6         22.3        1144        22.8
GR      23.1    1292.3       33.5     1310.1         33.5      1328.1        21.1
GR      18.8      1548       18.8       1572           28        1592          28
GR         8      1669         27       1728           27        1768          22
GR        33      1891         33       1897           22      1911.5        21.5

X1     64200          24     1304.1     1662.0        148.1       155.2        95.0
  GDM 61100
X3        10
GR        22    1130.9       22.6     1194.7         22.7      1196.6          23
GR      23.1    1263.1       23.1     1268.1         33.6      1286.1        33.6
GR      21.1      1377       18.9       1571         18.9        1627          27
GR         8      1717          8       1756           29        1816          29
          22      1874         33       1909           33        1930          22

X1     64300          24     1451.7       1838        130.0       450.0       300.0
  GDM 61400
X3        10
GR      21.9      1000         22     1052.6           22      1062.3        22.
GR      22.5      1164       22.9     1223.6         22.9      1233.6        23.
GR      33.6    1451.7         22     1489.7           19      1681.7          1
GR        28      1876          8       1908            8        1940          3
GR        25      2012       33.4       2037         33.4        2052        22.

X1     64700          28     1438.3     1703.3        160.0       260.2       200.
  GDM 61600
X3        10
GR        22    1016.6       22.7     1151.3           23      1212.9        23.
GR      27.2    1403.3         33     1413.3           33      1438.3          2
GR        19    1690.3         30     1703.3           30      1748.3
GR        35    1856.3         35     1871.3           31      1886.3        33.
GR        23    1900.7         23     1963.3           23      2013.8        22.
GR      22.9      2063         23     2065.2           23        2075

X1     65000          17       1255     1510.0        110.9       360.1       171.
  GDM 61771
X3        10
GR      22.1      1000       22.1     1048.2         22.9      1194.2           2
          34      1255       20.3       1295         19.3        1475           2
           8      1557          8       1580           36        1635           3
GR      33.7      1692       33.7       1711            0           0
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        65100          30        1255        1507          160          60         12
  GDM 61900
X3         10
GR         22        1000          22      1062.9         22.3      1147.9          2
GR         34        1237          34        1255           21        1301          2
GR         28        1507          28      1512.7           26        1517
GR         34      1669.1          34        1699           28        1716        33.
GR       33.8      1744.7        34.4      1746.3           31      1752.2        31.
GR       32.1      1787.5        25.6      1800.7           25      1864.5          2

X1      65300          24      1335.4        1622          285         160         22
  GDM 62125
X3         10
GR         22        1000          22      1063.7         22.2      1120.2        22.
GR       24.6      1299.9        24.6        1301         34.5      1317.2        34.
GR       28.5      1379.4          24      1389.4           24      1471.4          2
GR         31      1622.4          31      1625.4            8        1675
GR         35      1801.2          28        1813         34.1        1826        34.

X1      65400          20        1230        1468         72.0        70.0        75.
  GDM 62200
X3         10
GR         22        1000          22      1052.2           22      1108.4          2
GR         35        1210          35        1230         30.5        1236        30.
GR         24        1290        19.5      1438.1           30        1468          3
            8        1563          34        1642           34      1657.5        34.

X1      65600          25        1280        1657          200         220         20
  GDM 62400
X3         10
GR         22      1053.9          22        1234           35        1260          3
GR         22        1334        19.5        1527         19.5        1530          3
GR         12        1722          12      1742.3           37      1800.0          3
GR       35.0      1832.0        35.0      1848.0         32.3      1855.9        32.
GR       26.9      1875.5        26.8      1875.8         26.8      1878.2          2

X1      65900          38        1299        1680          200         275       200.
  GDM 62600
X3          1    0
GR       22.6        1000        22.6        1259           35        1279          3
GR         22        1344          20        1550           31        1680          3
GR       16.1        1730        15.7        1731           13      1739.5          1
GR         31      1799.2          34      1808.5         34.4      1812.5        35.
GR         34      1824.7        34.1      1825.9         32.8      1829.3          3
GR       31.7      1838.9        32.5      1841.4         32.5      1859.4        32.
GR         25      1910.3        24.1      1942.5           24        1943        24.
GR         24      2008.6          24        2073           24        2075
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         66100          20        1285        1670       200.4       225.0       190.
   GDM 62800
X3          10
GR        22.3        1000        22.3        1240          35        1265         35
GR          20        1535          32        1670          32        1680         12.
GR        33.0      1781.8        25.5      1799.7        25.5      1811.5         35.
GR          25      1872.5          25      1927.5        24.8      1999.1         24.

X1       66700          17        1300        1667       270.0       630.0       400.
   GDM 63200
X3          10
GR          22        1000          22        1250        35.4        1280         35.
GR          20        1530          32        1667          32      1681.5         23.
GR          13      1845.9        37.0      1884.0        37.0      1923.5          35
GR        35.3      1950.6        34.8      1971.6

X1       66900          30        1270        1635       190.0       230.0       200.
   GDM 63400
X3          10
GR        21.9        1000        21.9        1220          36        1250          3
GR          20        1535          32        1635          32        1660         29.
GR        24.1      1676.8          13      1693.7          13      1720.7         14.
GR        18.4      1777.7        25.8      1788.4        27.3      1790.8         27.
GR        35.4      1802.2        33.4      1809.1        37.9      1810.5          3
GR          32      1836.9        28.5      1845.5        33.1      1859.6         33.

         67300          37        1205        1565         200         210       205.
   GDM 63600
X3          10
GR        21.5        1000        21.5        1160        34.5        1185         34.
GR          20        1485          37        1565          37      1570.9         36.
GR        28.6      1599.3          20      1612.1        19.2      1613.7          1
GR        15.5      1640.8        15.6      1641.1        17.1      1647.4         17.
GR          18      1697.7          19      1708.4        25.1      1716.2         29.
GR        36.9      1731.3        37.3      1736.6        37.3      1736.8         37.
GR        33.2      1757.8        32.7      1759.3        27.3      1772.3         26.
GR        33.2      1856.1        23.9      1874.6           0           0

X1       67500          38        1155      1548.6       204.3        200.        200
   GDM 63800
X3          10
GR        20.3        1000        20.3        1105        34.8        1135         34.
GR          20        1425        33.5      1548.6        15.8      1607.7         15.
GR          15      1638.1        15.7      1639.4        17.5      1644.5          1
GR        19.1      1690.1        19.4      1690.6        29.1      1704.6         29.
GR        28.8      1715.4        28.6      1717.8          28      1731.9          2
GR        27.6      1750.1        27.6      1751.6        26.8      1763.7         26.
GR          26        1803        27.5      1806.1        27.5      1824.3         26.
GR        33.3      1852.1        33.3      1870.3          25      1887.1
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         67540          32        1155      1540.2        34.6        34.6        34.2
   GDM 63834
X3          10
GR        20.4        1000        20.4        1105        34.8        1135        34.8
GR          20        1425          34      1540.2          34      1550.9        33.9
GR          15      1611.7          15        1638        19.7      1644.1        20.7
GR        25.6      1669.2        26.2        1672        26.8      1679.5          27
GR        27.8      1709.3          28      1712.9        27.9        1741          26
GR        27.6      1813.6        27.6      1832.3        26.4      1834.6        33.3
GR        26.3      1890.9          25      1898.5           0           0           0

X1       67700          40        1125      1517.5       148.7        78.9       165.8
   GDM 64000
X3          10
GR        21.1        1000        21.1        1075          35        1105          35
GR        20.5        1410          35      1517.5          35      1524.1        33.5
GR        25.4      1541.5        24.5      1543.3        18.5      1553.2        16.6
GR          15        1588          17      1593.7        17.4      1594.7        29.4
GR          29      1635.5        31.2      1645.8          32      1655.9        32.7
GR        32.8      1680.2        30.9      1692.7        30.7      1694.9        30.6
GR        26.9      1762.5        26.9      1820.1        26.9      1831.4        27.9
GR        26.9      1853.5        26.9      1857.4        33.4      1877.4        33.5

X1       67850          43        1145      1445.6       126.9       155.7        175.
   GDM 64133
            10
          21.8        1000        21.8        1100          35        1125          3
GR        20.5        1415          36      1445.6          36      1446.6          3
GR        35.1      1465.4          24        1484        21.7      1487.4         20.
GR        15.1      1496.2          15      1496.3          15      1515.2         16.
GR        16.4        1525        16.5      1525.5          17      1528.9           1
GR        21.9      1541.1        22.8      1542.8        28.8      1556.6         29.
GR        30.6      1560.4          31      1561.2          31      1581.2         30.
GR        30.4        1588        29.3      1593.5          29      1595.5           2
GR          40      1628.4          40      1640.5        36.1      1649.8

X1       67920          46        1115      1417.7        69.1        72.8         70.
   GDM 64200
X3          10
GR        22.4        1000        22.4        1070          35        1095           3
GR        20.5        1325          37      1416.1          37      1417.7           3
GR        33.2      1437.1        27.5      1449.6        25.7      1454.1         20.
GR        15.2      1477.8          15      1478.2          15      1498.8         16.
GR        30.6      1563.2          31        1565        31.1      1566.6           3
GR          41      1606.9          41      1613.3        40.2      1618.3           4
GR        36.3      1634.4        33.3      1642.6          27      1662.4           2
GR        26.9      1718.5        26.6      1798.5        26.5      1844.1         28.
GR        27.5      1867.6        26.4        1870        26.4      1872.7         33.
GR        26.2      1928.4           0           0           0           0
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X1    68000       38     1115   1388.5    155.3    153.0    150.0
  GDM 64350
X3       10
GR     22.7     1000     22.7     1070       35     1095       35
GR     20.5     1325       37   1388.5       37   1402.1     34.8
GR     32.3   1421.1     32.2   1421.3       32   1421.5     31.6
GR     20.8   1440.2     18.8   1444.3       15   1451.4       15
GR     15.9   1473.7       17   1478.3     17.3   1479.2       20
GR       23   1510.3     26.7   1528.9       28   1534.2     31.5
GR       33   1549.5       39   1559.3     39.9   1564.1       40
GR     40.3   1584.8     30.2   1616.5       27   1638.3        0

X1    68050       48     1130   1381.7     50.8     49.9     50.0
  GDM 64400
X3       10
GR     23.1   1055.4     23.1     1085     35.5     1110     35.5
GR       21     1290       37   1381.7       37   1382.3       37
GR     36.7   1390.8     36.7   1392.4     36.6   1392.8     36.6
GR     34.5   1403.9       28   1414.1     27.9   1414.2     27.6
GR       16   1432.6       16   1442.5     16.5   1446.4     16.7
GR       16   1455.4     16.9     1457     18.5   1459.1     18.8
GR     20.4   1480.6     20.9     1485     21.4   1488.2     21.8
GR     32.6   1534.4       32   1535.3       32   1538.6     37.6
GR       39   1554.4     39.1   1554.8       40   1561.3       40
GR     35.8   1585.1     30.7   1600.8     30.4   1601.6        0

X1    68100       37     1130   1387.3     55.9     55.8     55.9
  GDM 64456
X3       10
GR     22.9     1000     22.9     1085     35.5     1110     35.5
GR     20.5     1290     36.5     1387     36.5   1387.3     36.4
GR     33.4   1398.5     33.2   1398.8     25.5   1408.7     16.4
GR       16   1445.1     18.9   1451.6     20.6     1455     20.6
GR     23.2   1467.3     23.6   1469.7       26   1494.7       26
GR       31   1525.8     33.2   1533.2     33.3   1533.6     33.4
GR     34.7   1537.5       40   1552.7       40   1564.7     40.8
GR       28   1592.5       27   1604.4        0        0        0

X1    68400       48     1140   1356.1    148.0    162.5    190.
  GDM 64600
X3       10
GR     23.6     1000     23.6     1095     35.5     1120     35.
GR       21     1280       36   1356.1       36   1375.3      3
GR     27.9   1405.1     17.8   1426.5     17.5   1427.2     17.
GR       16   1430.5       16   1444.8       18   1450.2      1
GR     19.1   1466.2     19.3   1468.4     19.4     1469      2
GR     34.1   1519.4       40   1530.4       40   1548.5      4
GR       27     1642       27   1697.3     26.8   1753.3     26.
GR       27   1938.1     27.4     1939     29.2   1942.6     29.
GR       27   1973.3       34   1995.8       34   2014.8      2
       27.5   2063.2     27.6   2063.4     27.4     2075
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X1     68700          40        1130      1329.6       205.1       225.5       260.0
  GDM 64800
X3        10
GR        25        1000          25        1085        35.5        1110        35.5
GR      21.3        1260          36      1329.6          36      1339.9          36
GR      19.5        1368          16      1373.8          16      1407.7        19.3
GR      27.2      1463.5        29.6        1484          30      1486.4          31
GR      39.5      1534.8        39.8      1542.4        39.3      1545.4        39.3
GR      39.2      1550.4        39.1      1550.9        36.6        1559        36.2
GR      34.7      1565.6        30.6      1576.9        29.9      1579.2        29.9
GR      27.8        1639        27.6      1689.9        27.4      1737.1        27.2

X1     69000          36        1140      1370.8       268.8       215.7       270.0
  GDM 65000
X3        10
GR      25.1        1000        25.1        1095          36        1120          36
GR      21.5        1265          39      1370.8          39      1382.9          39
GR      26.2      1412.6        23.3      1415.4        20.6      1418.6        19.6
GR        16      1458.8        16.4      1460.4        18.7      1480.6        19.5
GR      21.9      1531.2        22.8      1537.8        23.5      1552.4        23.7
GR      24.8      1609.9        25.2      1615.7        26.4      1625.5        27.
GR      30.8      1656.3        31.7      1663.7          36      1677.4        39.7
GR        40      1749.9           0           0           0           0

X1     69400          33        1265      1567.9       270.9       170.4       270.
  GDM 65200
X3        10
GR        27        1016          27        1225        36.5        1245        36.
GR        22        1470          39      1567.9          39      1574.7          3
GR      36.9      1590.6        35.9      1596.1        32.5      1603.3          3
GR        30      1728.4          28      1744.3        22.1        1760        20.
GR        16      1781.6        18.2        1807        26.4        1817        26.
GR        31      1855.3          32      1910.7        31.4      1917.6          3
GR      33.5      1950.9        38.9      1962.8          39      1981.4

X1     69500          51      1245.9      1599.3       113.4       135.1       200.
  GDM 65363
X3        10
GR        28        1000          28      1053.7        27.7      1108.6        27.
GR      27.6      1212.3        37.1      1227.9        37.1      1245.9        28.
GR      23.3      1300.2        23.1      1321.2        22.6      1383.1        22.
GR      28.4      1526.6          29      1570.6          29      1572.4        32.
GR      33.2      1581.9        33.4      1582.3        34.3      1584.6          3
GR        39      1599.3          39      1608.4        36.4      1616.6        35.
GR        33      1631.6        32.3      1635.9        31.7      1637.6        27.
GR      19.6      1666.2        18.2      1670.2        17.7      1671.2        17.
GR        16      1725.2        20.1        1740        20.4      1741.4        21.
GR        27      1777.2          27      1777.3        29.8        1793          3
GR      31.1      1832.9           0           0           0           0
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        69600          50      1252.2      1580.9          36          36        36.6
   GDM 65400
X3         10
GR         28        1000          28      1071.4        27.8        1140        27.8
GR       37.1      1234.2        37.1      1252.2        28.7      1272.6        28.7
GR       22.6      1393.4        22.2      1438.6        22.2      1508.6        29.1
GR       30.6        1564        37.2      1577.5          39      1580.9          39
GR       37.3      1601.7        34.3      1611.7        34.3      1611.8        34.1
GR       22.3      1641.8        21.5      1644.7        21.4      1645.6          17
GR       17.1        1686        18.8      1698.6        19.3      1700.5        19.6
GR       24.4      1716.7        24.7      1717.3        26.4        1723        26.7
GR         30      1771.8        30.6      1775.6          31      1783.9        35.1
GR         36      1857.5        36.2      1863.4        36.7      1870.5        36.9

X1      69800          43      1281.4        1558       264.7       210.7        200.
   GDM 65600
X3         10
GR         29        1000        28.7      1059.3        28.9      1109.6        28.7
GR       28.6      1172.8        28.6      1184.4        28.6      1249.4        37.2
GR       29.6      1299.4        29.6      1317.4        23.5      1335.7        23.5
GR       22.4      1470.8        22.4      1480.8        29.1      1500.9          30
GR       34.6      1540.1          37      1544.8        39.3      1548.6          40
GR         41      1556.4        41.5        1558          40      1559.9          36
GR       16.2      1616.6          20      1637.7        33.3      1683.7        40.4
GR         41      1717.6        41.1      1717.9        40.4      1719.1        34.8
         31.6      1741.4        31.4        1742          29      1747.6           0

X1      69900          50      1302.5      1563.4       200.1       200.0       200.0
   GDM 65800
X3         10
GR       29.5        1000        29.9      1085.9        29.6      1139.4        29.7
GR       29.7      1272.1        37.5      1284.5        37.5      1302.5        31.2
GR         24      1356.2        23.5      1401.4        22.6      1492.8        30.2
GR       31.2      1527.3        35.7      1544.7        35.7      1545.3        36.
GR       35.5        1557          42        1560          42      1563.4          36
GR       26.7      1592.7          19      1602.3        16.4      1622.4          2
GR       24.9      1681.7        27.6      1693.5        28.7      1696.1        36.
GR       41.3      1727.6        37.3      1730.3          33      1741.6        30.
GR       29.7      1815.5          30      1867.6        30.9      1869.4        31.4
GR       30.3      1891.6          30      1892.2        29.9      1897.8          35

X1      70000          50      1295.3      1579.9       119.2       119.1       117.5
   GDM 65918
X3         10
GR       29.5        1000        29.7      1060.6        29.9      1112.1          3
GR         30      1265.3        37.7      1277.3        37.7      1295.3        31.
GR       24.1        1349        23.9        1372        23.5      1405.4        22.
GR       22.7      1497.3        31.7      1524.3          32      1542.2        32.
GR       32.8      1547.2        32.8      1547.4        32.9      1548.2        35.
GR       42.5        1576        43.7      1579.5        43.9      1579.9          4
           43      1588.8        40.7      1595.3        39.2      1598.9        34.
           19      1634.4        16.5      1649.4          22      1680.6          2
GR       25.5      1694.4          31      1709.5        37.6      1730.1        38.
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   17JUL95         11:47:34


           41     1742.6       41.9     1744.9          39     1747.6        32.

X1      70100         49     1291.7     1599.8        94.2       88.6        72.
  GDM 66000
X3         10
GR       29.6       1000       29.6     1059.9          30       1143         3
GR       37.8     1273.7       37.8     1291.7        31.7     1304.6        31.
GR       23.7     1394.3       22.8     1479.4        22.8     1519.4        31.
GR       32.9     1560.3       32.9     1560.7          33     1561.6        33.
GR       39.4     1578.1       43.4     1588.6        43.2     1589.3        45.
GR       47.7     1599.8       47.5     1600.8        44.2     1605.3        37.
GR       21.9     1638.5       19.5     1642.1        16.6     1655.5        20.
GR       37.9     1744.7         41       1753        41.6     1754.9        39.
GR       31.7     1784.7         31     1790.9        30.4     1826.4        31.
GR         30     1850.3       35.2     1866.1        35.2     1884.1        29.

X1      70200         49     1276.8     1668.5       235.9      225.8       175.
  GDM 66200
X3         10
GR       29.9       1000       29.9     1058.3        30.1     1118.1        30.
GR       38.0     1258.8       38.0     1276.8          32     1289.4         3
GR       23.7     1379.4       22.9     1460.4        22.9     1550.4         3
GR         32     1599.3       32.1     1601.1        32.1     1603.3         3
GR       33.1     1626.9       35.8     1643.1        41.3     1668.5         4
GR       41.3     1674.6       40.4     1675.4        36.6     1685.8        36.
GR       33.8       1694       29.8     1702.7        28.9     1704.9         2
         16.8     1738.7       19.1     1748.8        19.7     1750.3        25.
         31.7       1773       33.4     1775.3        35.7     1778.8         3
GR       43.1     1790.3         43     1792.8        43.2     1802.2        38.

X1      70400         49     1268.9       1648       243.9      246.3       180.
  GDM 66400
X3         10
GR         30       1000         30     1050.9          30     1102.5        30.
GR       30.8     1239.9       38.2     1250.9        38.2     1268.9        31.
GR       24.1     1323.5       23.9     1357.5        23.1     1444.8        23.
GR       32.4     1604.6       33.7       1620        33.8     1620.3         3
GR         36       1634         43       1648        42.9     1664.5        43.
GR         33     1716.7       32.4     1717.5        27.9     1724.6         1
GR       22.1     1775.6       23.7     1778.3        24.4     1779.6        24.
GR       25.1     1780.9       32.2     1793.8        33.2     1795.9         3
GR       34.1     1809.3       34.3     1811.1          42     1831.9        42.
GR       32.4     1907.3       35.8     1915.4        35.8     1933.4        32.

X1      70600         42       1350     1593.6       243.4      233.0       180.
  GDM 66600
X3         10
GR       30.1       1000       30.1       1315        38.4       1330        38.
GR       23.2     1445.3       23.2     1525.3          32     1551.7         3
GR       34.7     1576.7       35.7       1579        36.6     1582.3        37.
GR       38.1     1593.6       38.1       1594          38     1594.7         3
         36.7     1610.9         36     1613.6        35.7     1616.8         3
           34     1638.7       32.4     1647.7        32.3     1647.8        25.
GR       17.1       1697         19     1715.8        31.2     1739.2        32.
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   17JUL95      11:47:34

          34    1744.7        36    1761.6      36.3    1763.1         4
        45.2    1799.6      42.4    1807.9         0         0

X1     70800        48    1264.1    1563.2     236.6     225.0      180.
   GDM 66800
X3        10
GR      30.2      1000      30.3    1027.7      30.6    1100.2       30.
GR      38.6    1246.1      38.6    1264.1      32.4    1276.7       32.
GR      24.3    1366.7      23.6      1438      23.4    1456.1       23.
GR        35    1531.4      41.8    1562.2      41.9    1562.8         4
GR      42.1    1572.2        40    1577.9        36    1598.9       35.
GR      24.3    1633.2      23.9    1633.6      17.3    1641.1         2
GR      28.7      1700        31    1706.1      31.1    1708.3         3
GR      36.1    1737.3      36.8    1739.2      42.4    1756.4       42.
GR      41.1    1765.7      34.5    1793.4      33.1    1846.5       33.
GR      36.3    1891.6      36.3    1909.9      32.3    1918.1

X1     71000        41    1338.9    1563.6     230.6     210.5      180.
   GDM 67000
X3        10
GR      30.7      1000        31    1062.8      31.2    1128.9       31.
GR      32.9    1308.9        39    1318.9        39    1338.9       24.
GR      33.5    1507.3        34    1541.8      41.7    1563.6       41.
GR      38.4    1569.6      38.1    1570.1      31.8    1579.9       23.
GR      17.5    1605.6      20.1    1614.8        24    1635.1         2
GR      27.2    1651.6      35.9    1691.2      39.7    1704.6       40.
        43.4    1718.4      44.5    1723.1      42.2      1724         4
          34    1746.2        34    1827.1      33.8    1858.9       36.
GR      33.3    1889.2         0         0         0         0

X1     71050        40    1339.1    1559.5      25.8      25.6       21.
   GDM 67022
X3        10
GR      30.8      1000        31    1055.7      31.4    1131.8       31.
GR      31.8    1174.4      32.4    1244.4      32.9    1308.9       39.
GR      24.8    1365.5      23.6    1491.6      33.5    1500.9         3
GR      36.4    1549.6      35.9    1556.9        40    1558.8       40.
GR      17.5    1597.8      20.2    1612.5      23.3    1627.1         2
GR      32.6    1667.3        34    1679.6      38.5    1696.7       39.
GR      42.3    1715.1      41.6    1719.5      41.1    1721.6         4
GR        34    1828.4      33.8    1858.3      36.6    1864.1       36.

X1     71200        44    1301.8    1553.5     179.5     178.3      178.
   GDM 67200
X3        10
GR      31.2      1000        31    1003.5        31    1054.7       31.
GR      31.9    1197.3      31.9    1219.2      32.1    1274.2       39.
GR      33.1    1313.2      33.1    1331.2        25    1355.5       24.
GR      23.7    1494.6      33.4    1507.2        34    1535.1       33.
GR      35.8    1552.1      35.9    1552.4        36    1553.5         3
GR      26.8    1634.2      26.9    1635.3      27.1    1635.7       32.
        35.5      1660        36      1665      41.4    1678.9         4
        40.8    1693.4      40.5    1694.7        33    1719.6       33.
GR      36.5    1865.2      36.8      1866      36.8      1884       33.
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   17JUL95        11:47:34


       71250          50     1306.3     1550.7       39.2       37.0      36.9
  GDM 67237
X3        10
GR        31        1000         31     1050.8         31     1057.1      31.5
GR      31.9      1228.3         32     1278.3       39.3     1288.3      39.3
GR      33.1        1336         25     1360.3       24.6     1407.6      23.9
GR      34.1      1518.5       34.5       1529         35     1530.8        37
GR      39.8      1550.1         40     1550.7         40     1553.1        40
GR      30.1      1576.2       28.3     1579.1       22.6     1590.6        19
GR      19.1      1623.4       19.3     1623.7         34     1649.9        36
GR      39.5      1679.1       41.6       1684       42.4     1686.1        43
GR      41.1      1697.4         41     1697.9       42.5     1707.4      38.1
GR        34      1722.4         34     1777.2       33.6     1862.7      36.9

X1     71400          51     1329.4     1575.6      136.5      156.5     190.1
  GDM 67400
X3        10
GR      30.9        1000       30.9     1067.4         31     1133.5      31.4
GR        32      1301.2       39.5     1311.4       39.5     1329.4      33.2
GR      25.4      1382.5         25     1421.5         24     1519.7      23.9
GR      38.2      1561.9       38.8     1567.9       38.8     1568.6      38.9
GR        39      1575.6         39     1577.5       37.7     1580.4      35.8
GR      34.3      1586.7       33.6     1588.3         19     1612.7      17.9
GR      27.1      1664.7         31     1672.4       35.4       1682      37.5
GR        43      1708.4         43     1713.1       40.2     1724.8      40.2
        40.1      1725.4         40     1725.7       38.2     1741.2        35
          34      1766.9         34     1811.9       34.2     1869.5        3
GR      35.2      1896.5          0          0          0          0

X1     71600          47     1329.2     1594.4      156.9      181.6     230.0
  GDM 67600
X3        10
GR      31.1        1000       31.9     1071.6         32     1122.2        3
GR      32.3      1251.4       32.5     1301.4       39.7     1311.2      39.7
GR      33.4      1359.2       25.5     1382.9       25.1     1424.6      24.8
GR      24.1      1519.8       34.1     1549.8       35.2     1575.7        3
GR        39      1601.1         19     1650.8       18.1     1677.7      21.
GR      35.9      1726.5         36     1726.7         36     1726.8      36.
GR      41.7      1741.4       41.8     1749.2       41.7     1750.1      41.
GR      43.5      1761.5       39.3     1762.4       38.4     1767.7        3
GR      34.4      1791.8       34.3     1795.1         34     1846.4        3
GR      37.1      1885.9       34.1     1891.8          0          0

X1     71700          47     1327.6     1596.1       55.7       69.8      82.
  GDM 67672
X3        10
GR      31.6        1000       31.9     1013.7       32.2     1073.6      32.
GR      32.7      1240.4       32.9     1300.4       40.0     1309.6      40.
GR      33.5      1357.6       25.5     1381.6       24.9     1443.6      24.
GR      34.7      1560.8         35     1574.5       37.5     1588.5      37.
          39      1603.8       38.3     1607.4       38.1       1608        3
        27.3      1660.3       25.1     1667.4         24     1673.3      19.
GR      18.1      1700.6       19.1     1704.4       22.3     1717.6        2
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   17JUL95        11:47:34

         31.7       1734         42     1748.5         42     1769.2       40.
         35.4     1790.5       35.2     1808.1       34.5     1816.3       34
GR       37.1     1879.3       34.2     1885.3          0          0

X1      71720         43     1325.6       1598       12.9       12.9       12.
  GDM 67685
X3         10
GR       31.7       1000         32     1043.4       32.4       1109       32.
GR         33     1298.6       40.0     1307.6       40.0     1325.6       33.
GR       25.5     1379.6       24.9     1439.8       24.2       1507       24.
GR         35     1575.6         39       1598         39     1601.7       3
GR         36     1634.9       35.8       1636       35.6     1636.6       2
GR       25.6     1677.1         24     1681.8         19     1694.8       18.
GR       21.3     1721.5       24.9     1726.9       28.7     1731.8       41.
GR         42       1771       36.3     1790.1       35.9     1792.7       34.
GR       37.1     1858.9       37.1     1877.1         34     1883.4

X1      71900         50       1330     1609.3        100        100        80
  GDM 67800
X3         10
GR         32       1000       32.1     1070.3       32.4     1106.1       32.
GR       32.9       1235         33       1303       40.1       1312       40.
GR       33.7     1359.4       25.4     1384.3       25.2     1402.4       24.
GR       34.9       1561         35     1561.6         37     1588.4       38.
GR         39     1600.2       39.4     1602.7       39.5     1602.8       40.
GR       40.5       1613       40.3     1614.2       40.3     1614.5       40.
         35.5     1650.8         29     1664.5       27.9     1669.4       26.
           19     1707.3       18.3     1735.2       19.2     1740.5       19.
GR       32.9       1757       33.3     1757.5       34.9     1759.7       35.
GR       42.3     1771.6       42.1       1778       42.7     1779.6       43.

X1      72000         47     1316.8     1616.9      226.8      215.3      185.
  GDM 68000
X3         10
GR       31.6       1000       31.3     1004.6       31.3     1026.9        3
GR         32     1042.4         33     1097.4       33.2     1151.3       33.
GR       34.1     1291.8       40.4     1298.8       40.4     1316.8       35.
GR       25.7     1370.5       25.6     1376.4       25.1     1431.9       24.
GR       35.8     1563.9       35.9     1587.3         36     1602.2        4
GR         41     1620.6       30.2     1650.9       29.9     1651.6       19.
GR       19.1     1683.8       21.4     1700.6       27.9     1734.6        3
GR         38     1748.8         43     1767.7       43.7     1769.5       43.
GR       43.7     1781.1       37.1     1796.6         35     1806.6       34.
GR       37.4     1884.7       34.5     1890.5          0          0

X1      72200         43       1285     1594.8      226.0      216.7      190.
  GDM 68200
X3         10
GR       32.4       1000       32.3     1006.2         33     1014.4        3
GR       33.5     1131.4         34       1202       34.1     1250.7       34.
GR       40.6       1265       40.6       1285       27.5       1315        2
           38     1594.8         39     1605.2         39     1605.8       39.
           40     1616.3         40     1616.6       39.9     1616.8       38.
GR       38.4     1630.1       35.6     1635.1       24.8       1657        2
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   17JUL95      11:47:34

         19.9    1666.6      18.6    1678.4      21.5    1691.8      21.
         33.9    1721.9      36.2    1728.3        39    1734.9      44
GR         44    1763.7        40      1776        36    1793.5

X1      72500        44      1247      1557     226.3     217.4     190.
  GDM 68400
X3         10
GR       33.2      1000      33.2      1217      40.8      1227      40.
GR         25      1452      37.9      1557      38.6    1598.5      38.
GR       38.5    1610.4      38.5    1627.1      38.6    1628.4      38.
GR       38.6    1635.7      39.1    1637.7      36.4    1642.8      36.
GR       29.4    1653.2        29    1653.8      19.9    1666.1      18.
GR       20.1    1691.8      20.1    1692.1      30.6    1723.5      33.
GR         36    1746.4      41.1    1768.1        42    1772.8      4
GR       36.2      1807        36    1807.5        36    1810.1      35.
GR       37.8    1834.3      37.8    1852.3      35.6    1856.8      35.

X1      72700        40    1334.4    1626.5       205       205      20
  GDM 68600
X3         10
GR         34      1000      34.6    1059.4        35    1122.9      35.
GR       36.6    1294.8      38.1    1297.8      38.1    1315.8      41.
GR       26.6    1368.3        25    1563.3        40    1626.5      4
GR         19    1691.7        19    1697.5      20.8    1700.4      20.
GR       22.5    1717.8        24    1727.6        24    1727.9      24.
GR       29.1    1739.3      36.4    1745.4      36.4    1746.9      4
           40    1791.6      37.5    1797.3      36.8    1802.3      36.
         41.2    1837.6      41.2    1857.6      35.8    1868.4      3
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**************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
**************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY


 COY3BP.DAT (BYPASS CHAN

SUMMARY PRINTOUT


       SECNO      CWSEL     RBEL      XLBEL      VCH        Q         EG      K*XN

    62800.000     27.68     29.00     32.80      1.55    9050.00     27.72      35

    62900.000     27.68     26.00     33.10      1.92    9050.00     27.74      35

    63000.000     27.68     27.00     31.40      2.33    9050.00     27.76      35

    63010.000     27.69     27.00     33.10      2.22    9050.00     27.77      35

 *  63200.000     27.68     28.00     33.10      3.08    9050.00     27.83      35

    63400.000     27.73     27.00     33.20      3.45    9050.00     27.92      35

    63600.000     27.81     25.00     33.40      3.59    9050.00     28.01      35

 *  63800.000     27.96     25.00     33.50      2.03    9050.00     28.07      35

 *  64000.000     27.81     28.00     33.50      5.04    9050.00     28.21      35

 *  64200.000     28.20     27.00     33.60      1.69    9050.00     28.27      35

 *  64300.000     28.20     28.00     33.60      3.12    9050.00     28.35      35

 *  64700.000     28.16     30.00     33.00      4.85    9050.00     28.52      35

    65000.000     28.29     27.00     34.00      5.03    9050.00     28.68      35

    65100.000     28.39     28.00     34.00      5.38    9050.00     28.84      35

 *  65300.000     28.76     19.50     34.50      2.07    9050.00     28.98      35

 *  65400.000     28.30     30.00     35.00      7.87    9050.00     29.26      35

    65600.000     29.37     30.00     35.00      2.09    9050.00     29.45      35
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   17JUL95        11:47:34

       SECNO        CWSEL      RBEL       XLBEL       VCH        Q            EG        K*XNC
*   65900.000       29.32      31.00      35.00       3.92    9050.00       29.56        35.
    66100.000       29.46      32.00      35.00       3.83    9050.00       29.68        35.
    66700.000       29.70      32.00      35.40       4.57    9050.00       30.03        35.
*   66900.000       30.03      32.00      36.00       1.91    9050.00       30.11        35.
*   67300.000       29.98      37.00      34.50       3.74    9050.00       30.20        35.
    67500.000       30.11      33.50      34.80       3.48    9050.00       30.30        35.
    67540.000       30.13      34.00      34.80       3.54    9050.00       30.32        35.
    67700.000       30.20      35.00      35.00       3.57    9050.00       30.40        35.
    67850.000       30.25      36.00      35.00       4.24    9050.00       30.52        35.
    67920.000       30.23      37.00      35.00       4.91    9050.00       30.61        35.
    68000.000       30.36      37.00      35.00       5.05    9050.00       30.76        35.
    68050.000       30.24      37.00      35.50       6.49    9050.00       30.90        35.
    68100.000       30.43      36.50      35.50       6.01    9050.00       30.99        35.
*   68400.000       31.05      36.00      35.50       2.27    9050.00       31.12        35.
*   68700.000       30.38      36.00      35.50       8.84    9050.00       31.59        35.
    69000.000       31.54      39.00      36.00       7.31    9050.00       32.37        35.
*   69400.000       32.42      39.00      36.50       4.46    9050.00       32.73        35.
    69500.000       32.66      39.00      37.10       3.42    9050.00       32.84        35.
    69600.000       32.66      39.00      37.10       3.65    9050.00       32.87        35.
*   69800.000       32.66      41.50      37.20       5.02    9050.00       33.05        35
    69900.000       32.80      42.00      37.50       5.81    9050.00       33.32        35
    70000.000       33.07      43.90      37.70       5.10    9050.00       33.48        35
    70100.000       33.24      47.70      37.80       4.42    9050.00       33.55        35
    70200.000       33.47      41.30      38.00       3.47    9050.00       33.66        35
    70400.000       33.56      43.00      38.20       3.32    9050.00       33.73        35
    70600.000       33.49      38.10      38.40       5.16    9050.00       33.91        35
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17JUL95        11:47:34

    SECNO       CWSEL      RBEL       XLBEL       VCH        Q           EG       K*XN
70800.000       33.71      42.00      38.60       4.80     9050.00       34.07       35.
71000.000       33.67      41.70      39.00       6.80     9050.00       34.39       35.
71050.000       33.70      40.20      39.10       6.85     9050.00       34.43       35.
71200.000       34.25      36.00      39.20       5.58     9050.00       34.73       35.
71250.000       34.31      40.00      39.30       5.47     9050.00       34.78       35.
71400.000       34.54      39.00      39.50       5.29     9050.00       34.98       35
71600.000       34.77      39.00      39.70       5.35     9050.00       35.22       35
71700.000       34.93      39.00      40.00       4.93     9050.00       35.31       35
71720.000       34.96      39.00      40.00       4.79     9050.00       35.32       35
71900.000       35.01      40.60      40.20       4.94     9050.00       35.39       35
72000.000       35.21      41.00      40.40       4.65     9050.00       35.54       35
72200.000       35.40      38.00      40.60       4.21     9050.00       35.68       35
72500.000       35.52      37.90      40.80       4.29     9050.00       35.81       35
72700.000       35.68      40.00      41.00       4.00     9050.00       35.93       35
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17JUL95      11:47:34


 SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO=   63200.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   63800.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   64000.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   64200.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   64300.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   64700.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   65300.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   65400.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   65600.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   65900.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   66900.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   67300.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   68400.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   68700.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   69400.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   69800.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA

WARNING SECNO=   70600.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RA
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   15JUL95       10:30:09



 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************


T1                        9/18/90  COYOTE CREEK GDM
T2                                FINAL DECK
T3                            COY3E.DAT 3/14/91

J1   ICHECK     INQ        NINV       IDIR       STRT       METRIC     HVINS      Q

        0          2

J2   NPROF      IPLOT      PRFVS      XSECV      XSECH      FN         ALLDC      IBW

       1          0         -1          0          0          0         -1         0


J3   VARIABLE CODES FOR SUMMARY PRINTOUT

      38          1         24         23         26         43          3

     LPRNT     NUMSEC                      *******REQUESTED SECTION NUMBERS*******

     -10        -10

NC       .035       .035       .055        0.1        0.3
QT          1      12400
X1      72700         40     1315.8     1837.6          0          0
  GDM 68600
X3          1    0
GR         34       1000       34.6     1059.4         35     1122.9        35.
GR       36.6     1294.8       41.0     1297.8       41.0     1315.8        37.
GR       26.6     1368.3         25     1563.3         40     1626.5         4
GR         19     1691.7         19     1697.5       20.8     1700.4        20.
GR       22.5     1717.8         24     1727.6         24     1727.9        24.
GR       29.1     1739.3       36.4     1745.4       36.4     1746.9         4
GR         40     1791.6       37.5     1797.3       36.8     1802.3        36.
GR       41.2     1837.6       41.2     1857.6       35.8     1868.4         3
         BRTEST2.DAT 10/16/90  HERE TO END

X1      73000         21     1380.9     1850.6      201.9      203.9       200.
  GDM 68800
X3         10
GR       36.5     1312.9       36.7     1331.1       37.7     1333.1        38.
GR         37     1356.5         37     1359.2       41.3     1360.9        41.
GR       24.7       1590         43       1600         43       1610        18.
           43       1807         43       1813       37.5       1843        41.
GR       36.3     1878.6          0          0          0          0
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   15JUL95      10:30:09

          .035       .035       .035         .3          .5
X1    73200         35       1340       1650       206.4       229.3       200.
  GDM 69000
X3       10
GR     33.7       1000         34     1053.8          35      1126.3        35.
GR       37       1285       41.5       1320        41.5        1340        26.
GR       19       1445         19       1520          42        1650         4
GR     44.3     1713.8       42.6     1721.4        38.1      1734.4         3
GR     38.3     1756.1       38.3       1777        36.1        1782        36.
GR     38.2     1872.4       38.3     1872.6        38.5      1882.9        38.
GR       39     1897.8         39     1947.9          39        1957         3

X1    73450         24     1411.7       1610       239.1       218.1       200.
  GDM 69200
X3       10
GR     33.8       1000       34.4     1070.7          35      1136.8        35.
GR     36.8     1292.3       37.5     1340.4        38.1      1341.6        38.
GR     37.9     1362.3       38.2     1368.7        41.8      1391.7        41.
GR     26.8       1450       26.8       1470        19.6        1485        19.
GR       38     1864.3         38     1969.3          38      2064.7         3

X1    73550          6       1000       1276       150.0        60.0       100.
   GDM 69300
GR     40.2       1000       27.5       1025        27.5        1043        20.
GR       42       1276          0          0           0           0

            .9        1.5        2.7        160         100          10       220
X1    73700          6       1000       1276         130         130        13
   GDM 69430
GR     40.2       1000       27.5       1025        27.5        1043        20.
GR       42       1276          0          0           0           0
X2                              1      38.25        42.3

NC                           .045         .1          .3
X1    73900         38     1391.2       1600       130.0       210.0       170.
   GDM 69600
X3       10
GR     36.6       1000         38     1050.4        37.9        1102        37.
GR     37.9     1261.8       37.5       1287        37.4      1287.4        37.
GR     37.2     1311.1       37.3       1312        37.6      1325.9        37.
GR     37.8     1330.8         38     1348.5          39      1355.8        39.
GR       40     1391.2         21     1456.2          21      1496.2         4
GR       38     1618.7         38     1620.7        38.1      1620.7        38.
GR       38     1640.6         38     1716.9          38      1778.4        38.
GR       38     1955.3       37.8     2029.8          38        2075

X1    74000         48     1380.5     1613.0       200.7       200.0       200.
   GDM 69800
X3       10
GR     33.6       1000       33.5       1034        34.4      1043.6        34.
       34.5     1045.3         35     1052.3        34.9      1130.3         3
         37     1154.4         36     1165.9          37      1232.1         3
GR     38.9     1377.3         39     1380.5        37.8      1395.1        37.
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   15JUL95      10:30:09

         26.6     1437.1       25.9     1439.6          24     1455.6        22
         22.2     1496.5         24     1510.2        25.3     1553.3      33.6
GR       41.2     1599.3       42.1     1609.4        43.1       1613        41
GR         40     1717.2         40     1767.4        39.3     1823.1        39
GR       38.7     1886.6       38.9     1938.3        38.6       1993      38.7
GR       38.7     2027.8       38.8     2029.4          39       2075         0

X1      74300         43     1451.0     1640.5       192.5      226.3     200.0
X3         10
GR         33       1000         33     1052.8        32.9       1105      33.2
GR         35     1184.3         35     1235.3        35.8     1272.5        38
GR       37.3     1290.1         38     1346.6          40     1399.4        41
GR       36.6     1456.2       32.9     1475.8          27     1491.2      23.5
GR         22     1547.4       22.2     1548.3          24       1559      25.8
GR       36.2     1610.1       38.9     1616.5        39.1     1619.3      39.8
GR       39.9     1640.5       40.3     1647.4        40.2     1648.1      41.5
GR       41.4       1793       41.3     1795.1        41.1     1847.2      40.3
GR       39.8       1951       39.3     2007.3        39.5       2075         0

X1      74500         40     1477.8     1685.7       169.2      244.2     200.0
X3         10
GR       34.3       1000       34.5     1037.6        34.6     1039.4        3
GR         35     1153.1       35.1     1154.2        35.1     1154.7      35.
GR         37     1218.2         37     1260.8        36.2     1310.9        3
GR       39.7     1388.5       39.8     1390.6          40     1444.6        4
GR         28     1529.7         25     1562.2        23.6     1563.8        2
           25     1626.6       26.2     1631.8        27.6     1636.9      34.
GR       37.8     1678.7       39.5     1685.7          40     1735.9      40.
GR         41       1811         41     1872.7          40     1949.1      39.

X1      74700         51     1478.2     1670.2       175.7      223.1     200.
X3         10
GR       35.1       1000       35.3     1004.4          36     1062.4      36.
GR         37     1208.7         37       1276          37       1280      40.
GR         39     1310.7         40     1361.6          40     1378.7        4
GR         26     1533.9         25     1560.3        23.4     1563.8      22.
GR       23.2     1595.4       23.4     1595.9        23.7     1597.8      24.
GR       24.4     1611.1       25.8     1617.3        26.3       1620      26.
GR       31.5     1642.2       39.4     1665.6          40     1667.9        4
GR       40.1     1749.9       40.2     1751.5        40.4     1776.6        4
GR       41.7     1878.2       42.4     1883.6          43     1890.4        4
GR         41     1924.3       40.8       1940        40.7       1941      40.
GR         40       2075          0          0           0          0
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 15JUL95      10:30:09



*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY


                       COY3

SUMMARY PRINTOUT


      SECNO       CWSEL      RBEL      XLBEL       VCH          Q         EG      K*XNC

   72700.000      35.83     41.20      41.00      4.00   12400.00      36.08       55.

*  73000.000      36.10     41.30      41.30      2.83   12400.00      36.23       55.

   73200.000      36.12     42.00      41.50      4.09   12400.00      36.38       35.

  )73450.000      36.06     41.20      41.80      6.09   12400.00      36.64       35.

*  73550.000      36.60     42.00      40.20      3.55   12400.00      36.79       35.

   73700.000      36.63     42.00      40.20      3.54   12400.00      36.82       35.

*  73900.000      36.18     42.00      40.90      7.89   12400.00      37.15       45.
 ------ LNL LOMR STUDY
   74000.000      36.97     43.10      39.00      6.51   12400.00      37.62       45.

   74300.000      37.21     39.90      39.80      7.62   12400.00      38.11       45.

 | 74500.000      37.85     39.50      40.00      6.81   12400.00      38.57       45.

 | 74700.000      38.20     40.00      41.00      7.34   12400.00      39.03       45.
 V
 Unimproved
```

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   15JUL95       10:30:09


 SUMMARY OF ERRORS AND SPECIAL NOTES

WARNING SECNO=   73000.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   73450.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   73550.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
WARNING SECNO=   73900.000   PROFILE=   1   CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RAN
```

INT. Drain. HEC-2

Duplicate Effective FIS

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********************************************                                                ***********************************
*  HEC-2 WATER SURFACE PROFILES            *                                                *  U.S. ARMY CORPS OF ENGINEERS
*                                          *                                                *  HYDROLOGIC ENGINEERING CENTER
*  Version   4.6.2;  May 1991              *                                                *  609 SECOND STREET, SUITE D
                                           *                                                *  DAVIS, CALIFORNIA 95616-4687
*  RUN DATE    19MAY95    TIME   16:49:36  *                                                *          (916) 756-1104
********************************************                                                ***********************************




                                            X     X  XXXXXXX   XXXXX              XXXXX
                                            X     X  X        X     X            X     X
                                            X     X  X        X                        X
                                            XXXXXXX  XXXX     X          XXXXX    XXXXX
                                            X     X  X        X                  X
                                            X     X  X        X     X            X
                                            X     X  XXXXXXX   XXXXX             XXXXXXX
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                                                                                    THIS RUN EXECUTED 19MAY95    16:49:36
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version  4.6.2;  May 1991
*************************************


T1      GEORGE S. NOLTE AND ASSOCIATES                          128-79-00
T2      STORAGE DISCHARGE ANALYSIS
T3      COY-GUA SWALE WEST

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

                 3                                                                   4.7

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

     -1         0        -1


J5  LPRNT    NUMSEC                    ********REQUESTED SECTION NUMBERS********

    -10       -10

QT        2       7680       7680
NC   .035     .035       .035       .1          .3
        CROSS-SECTIONS CODED FROM MURRAY-MCCORMICK AERIAL TOPO 1"=200' NOV 71
        CROSS-SECTIONS ABOVE TRIMBLE FROM HP JOB 324-76-05
        CROSS-SECTIONS LEFT TO RIGHT LOOKING DOWNSTREAM
X1   0.       19.         910.          3230                                        .4
GR   4.2                3.8         120.        3.9         320.        3.1         510.        3.2         710.
GR   3.2      910.      3.0         1150.       3.0         1310.       3.0         1510.       3.0         1710.
GR   3.0      2400.     3.          2570.       3.          2780.       3.          2990.       4.          3230.
GR   5.       3400.     6.          3830.       7.          4080.       9.          4420.

ET            5.1                               1650.       4190.
        HY 237
X1   1.       15.       2030.       2500.       130.        130.        130.        .4
GR   6.5                5.9         250.        5.8         530.        5.5         700.        5.1         1050.
GR   5.1      1300.     5.8         1730.       5.4         2030.       5.1         2500.       5.1         2630.
GR   5.6      2830.     6.3         3100.       6.5         3320.       7.0         4000.       9.0         4200.

ET            5.1                               1500.       4300.
X1   2.       15.       2780.       3640.       110.        110.        110.        .4
GR   10.                5.3         20.         5.          80.         4.          500.        3.          520.
GR   3.       590.      4.          610.        4.          660.        4.          2780.       5.          3640.
GR   6.       3770.     6.          3850.       7.          3940.       8.          4120.       9.          4320.

 C            .05
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        LEFT BANK N VALUE RAISED TO 10 FOR UNEFFECTIVE FLOW AREA, RIGHT BANK RAI
        TO .05 FOR TRAILER PARK AREA
X1  3.      10.     3200.   6800.   350.    350.    350.    .4
GR  10.     3200.   5.4     3230.   5.      3420.   5.      4700.   4.2     5300.
GR  5.      5700.   5.      6500.   6.8     6800.   7.      7240.   8.      7500.

QT      2       6932    6932
X1  4.      13.     4500.   6960.   550.    550.    550.    .4
GR  10.     4500.   8.4     4700.   7.      4730.   6.      5200.   5.      5900.
GR  6.      5900.   6.      6050.   6.      6500.   5.      6960.   5.      7550.
GR  6.      7800.   7.      8040.   8.      8240.

QT      2       2380    2380
NC  .035    .035    .035
        ALL CROSS-SECTIONS TO TRIMBLE STATION 5000 IS CENTER OF N 1ST
        WSEL BASED ON WEIR CALS OVER N FIRST STREET
X1  5.      12.     4000.   6300.   550.    550.    550.    .4
X5  1.              9.9
GR  3.      2300.   4.      3270.   5.      3720.   6.      4000.   6.      4900.
GR  8.7     5000.   6.      5050.   6.9     6300.   5.      7350.   5.      7500.
GR  6.      7780.   8.      8200.

X1  6.      12.     4000.   6900.   600.    600.    600.    .4
GR  3.5     2100.   4.      2700.   5.      3200.   5.      4000.   7.      4900.
GR  9.      5000.   7.5     5020.   7.      6180.   6.      6900.   7.      7680.
GR  8.      7680.   10.     8000.

X1  7.      11.     4000.   6600.   520.    520.    520.    .4
GR  7.      2500.   7.      3300.   7.      4000.   8.      4970.   10.3    5000.
GR  8.      5020.   8.      5880.   7.      6600.   7.      7300.   9.      7600.
GR  10.     7750.

        RIGHT BANK TOP OF NORTH 1ST.
X1  8.      11.     3800.   5000.   550.    550.    550.    .4
GR  9.      2650.   8.      3200.   8.6     3800.   8.8     4950.   10.3    5000.
GR  8.8     5030.   8.      5700.   7.      6600.   8.      6900.   9.      7150.
GR  11.     7450.

X1  9.      10.     3500.   5000.   500.    500.    500.    .4
GR  8.      2530.   9.      3500.   9.      4200.   9.      4950.   10.8    5000.
GR  9.      5070.   8.6     5900.   9.      6650.   10.     6800.   12.     7100.

X1  10.     11.     3100.   5000.   500.    500.    500.    .4
GR  10.     2500.   10.     3100.   9.      3500.   9.      4950.   11.4    5000.
GR  10.     5050.   10.     6000.   9.      6200.   9.      6500.   10.     6650.
GR  12.     7000.

X1  11.     9.      2850.   5000.   500.    500.    500.    .4
GR  11.     2650.   11.     2850.   10.     3150.   10.     4950.   11.9    5000.
GR  10.     5040.   10.     6500.   11.     6800.   13.     7100.
```

```
X1   12.     12.      3150.    5000.    500.     500.     500.     .4
GR   11.     2820.    11.      3150.    10.      3700.    11.      4960.    12.8     5000.
GR   11.5    5030.    12.      5370.    12.      6200.    12.      6840.    13.      7150.
GR   14.     7160.    15.      7300.

X1   13.     10.      3000.    5000.    500.     500.     500.     .4
GR   12.     3000.    12.      4000.    12.      4970.    14.      5000.    13.      5040.
GR   13.6    5540.    13.      6100.    12.      6850.    13.      7050.    15.      7100.

X1   14.     9.       4200.    5000.    500.     500.     500.     .4
GR   13.     3250.    13.      4200.    13.      4930.    14.      5000.    13.5     5030.
GR   14.     5600.    13.      6350.    13.      6900.    15.      6970.

X1   15.     10.      4000.    5000.    500.     500.     500.     .4
GR   14.     4000.    13.      4300.    13.      4600.    14.      4960.    15.2     5000.
GR   14.     5030.    14.      5800.    14.      6800.    16.      6860.    17.      7100.

X1   16.     9.       4250.    5000.    500.     500.     500.     .4
GR   14.     4250.    14.      4720.    15.      4960.    16.      5000.    14.      5030.
GR   15.     5350.    16.      6700.    17.      7020.    18.      7200.

X1   17.     9.       4050.    5000.    500.     500.     500.     .4
GR   14.     4050.    15.      4940.    16.2     5000.    14.      5030.    15.      5400.
GR   16.     6250.    17.      6750.    18.      7070.    19.      7300.

X1   18.     8.       3720.    5000.    500.     500.     500.     .4
GR   15.     3720.    15.      4970.    16.7     5000.    15.      5030.    16.      5940.
GR   18.     6850.    19.      7300.    20.      7500.

        SPILL OVER NORTH 1ST TO EAST REJOINS AT SECTION 4
X1   19.     10.      3630.    5000.    500.     500.     500.     .4
GR   15.     3630.    15.      4970.    16.3     5000.    14.6     5040.    15.      5520.
GR   16.     5800.    17.      6500.    18.      7000.    19.      7300.    20.      7550.

QT         2       2380       2380
        MONTAGUE EXPRESSWAY

X1   20.     11.      3950.    5000.    500.     500.     500.     .4
GR   20.     3950.    16.8     4200.    16.1     4830.    16.5     5000.    14.7     5050.
GR   15.     5200.    16.      5700.    17.      6300.    18.      6970.    19.      7450.
GR   20.     7600.

X1   21.     11.      3600.    5000.    500.     500.     500.     .4
GR   17.6    3600.    17.      4100.    17.      4960.    18.5     5000.    15.      5030.
GR   15.     5350.    16.      5700.    17.      6700.    18.      7200.    19.      7420.
GR   20.     7540.

X1   22.     9.       3400.    5000.    500.     500.     500.     .4
GR   18.     3400.    17.      4970.    18.5     5000.    16.      5030.    17.      5900.
GR   18.     6400.    18.      6800.    19.      7350.    20.      7500.
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X1  23.        12.        3200.      5000.      500.       500.       500.       .4
GR  18.        3200.      18.        4000.      17.8       4960.      19.4       5000.      16.        5030.
GR  16.        5250.      17.        5600.      18.        5800.      19.        6350.      19.        6800.
GR  20.        7370.      21.        7550.

QT           2       2380       2380
X1  24.        13.        3000.      5000.      500.       500.       500.       .4
GR  20.        3000.      19.        3900.      18.        4500.      18.        4960.      20.6       5000.
GR  16.5       5020.      17.        5120.      18.        5350.      19.        6050.      20.        6500.
GR  20.        7200.      21.        7500.      22.        7620.

X1  25.        16.        3100.      5000.      600.       600.       600.       .4
GR  21.        3100.      20.        3700.      19.        3960.      18.        4430.      17.        4630.
GR  17.        4960.      19.6       5000.      17.        5040.      18.        5300.      19.        5700.
GR  20.        6250.      24.5       6500.      20.        6740.      20.        7070.      21.        7430.
GR  23.        7680.

X1  26.        13.        3200.      5000.      600.       600.       600.       .4
GR  20.        3200.      19.        4300.      19.        4960.      20.9       5000.      18.        5030.
GR  19.        5440.      20.        5730.      20.        6250.      23.        6400.      21.        6700.
GR  21.        7200.      22.        7530.      23.        7700.

X1  27.        15.        3000.      5000.      600.       600.       600.       .4
GR  21.        3000.      19.        3530.      19.        4150.      20.        4250.      20.8       4970.
GR  22.7       5000.      21.        5040.      21.        5500.      22.        6250.      24.5       6340.
GR  22.        6700.      21.4       6850.      22.        7150.      23.        7700.      24.        7920.

X1  28.        15.        3000.      5000.      500.       500.       500.       .4
GR  24.        2700.      22.        3000.      20.        3450.      21.        3900.      22.        4540.
GR  22.6       4960.      24.5       5000.      22.        5050.      22.        5640.      21.3       6000.
GR  22.        6300.      23.        6400.      22.        6800.      23.        7450.      24.        7940.

NC  .03        .03        .03
QT           2       2380       2380
ET             9.1        9.1        9.1        9.1                                          1.         3772.
X1  21837.     49.                   3772.9     200.       200.       200.
GR       33.1        0.0       34.6      183.5       32.3      467.2       27.7      904.7       27.0      924.4
GR       27.0     1202.4       26.6     1554.3       25.5     1774.1       24.9     2060.8       24.8     2399.5
GR       26.1     2806.1       26.4     3125.2       26.1     3315.5       25.8     3509.8       26.0     3703.3
GR       25.6     3772.9       25.6     3858.2       27.1     4087.6       26.4     4366.4       25.9     4591.4
GR       25.4     4853.2       24.8     4984.9       24.6     5064.5       24.6     5121.7       23.8     5399.7
GR       23.8     5472.1       23.2     5477.5       23.6     5572.7       24.3     5747.4       23.0     5753.8
GR       23.4     5803.9       24.0     5810.0       24.1     6077.5       24.3     6361.1       25.5     6460.8
GR       25.2     6467.5       26.3     6719.1       28.3     7018.4       28.3     7062.7       28.9     7076.4
GR       30.7     7382.3       33.1     7750.7       33.7     7818.1       33.1     7824.3       36.0     8174.8
GR       38.9     8527.6       41.5     8723.1       43.5     8873.9       43.3     9075.9

X1  21920.     57.        1020.      2250.      80.        80.        80.        1.         -1.6
GR  37.                   38.        60.        40.        105.       40.        190.       33.        280.
GR  30.5       350.       30.5       510.       33.        580.       36.        650.       36.        710.
GR  28.3       785.       27.7       786.       27.7       830.       28.3       831.       28.3       845.
GR  30.4       870.       27.5       900.       34.        960.       34.        1020.      30.        1120.
GR  28.5       1210.      28.5       1780.      31.5       1870.      33.        1945.      28.5       1980.
GR  35.5    2010.    26.1     2120.     25.6      2121.     25.6      2190.     26.3      2191.
GR  26.3    2200.    32.      2250.     27.       2265.     32.       2290.     32.       2400.
GR  27.     2415.    32.      2440.     32.       2470.     27.       2490.     32.       2520.
GR  32.     2610.    27.      2645.     27.       2690.     30.       2730.     30.       2840.
GR  27.     2860.    27.      2890.     32.       2920.     32.       3010.     27.       3020.
GR  27.     3030.    30.      3045.     30.       3170.     27.       3200.     31.       3220.
GR  30.     3240.    34.      3280.

ET          9.1      9.1      9.1       9.1                                     1.        3511.6
X1  22082.  71.      1360.    2596.1    145.      145.      145.
GR  29.              25.2     40.6      25.6      262.      23.9      513.      25.4      741.1
GR  25.0    780.     50.      780.1     50.       1360.     23.5      1360.1    23.8      1575.
GR  23.1    1900.6   22.9     2331.9    23.3      2596.     50.       2596.1    50.       3160.
GR  23.7    3161.    23.7     3162.     23.7      3163.     23.7      3428.3    25.9      3464.9
GR    26.7    3511.6      25.6    3550.6      22.3    3605.9      24.4    3867.1      23.5    4029.8
GR    22.9    4142.0      21.2    4345.7      21.4    4579.7      22.8    4785.7      24.0    4829.5
GR    24.6    4833.5      24.7    4853.0      24.0    4855.7      22.5    4894.0      25.3    4911.8
GR    22.5    4920.1      23.2    5101.1      23.0    5356.2      23.2    5540.9      24.4    5552.1
GR    23.2    5565.9      22.8    5867.5      23.9    6091.8      24.3    6240.1      26.2    6273.0
GR    25.6    6307.6      27.5    6318.1      25.0    6328.7      52.8    6429.1      24.8    6445.1
GR    53.8    6592.7      23.0    6611.8      59.4    6661.9      24.2    6675.6      60.4    6843.9
GR    24.0    6858.4      54.3    7003.5      26.6    7020.9      55.2    7192.1      29.7    7200.9
GR    67.1    7486.3      30.4    7496.4      66.8    8092.8      33.2    8102.9      33.3    8317.6
GR    35.2    8342.9      34.0    8376.1      36.2    8452.2      38.4    8517.8      36.5    8572.9
GR    39.6    8607.3

ET          9.1      9.1      9.1       9.1                                     1.        3488.
X1  22550.  27.      1850.1   2480.1    500.      500.      500.
GR  29.0             26.1     28.       26.0      288.      25.9      480.      50.       480.1
GR  50.     1850.    24.6     1850.1    24.6      1883.     24.       2250.     24.       2480.
GR  50.     2480.1   50.      3140.     24.9      3140.1    25.5      3410.     27.5      3445.
GR  28.4    3488.    28.4     3500.     24.7      3550.     25.9      3725.     25.7      3850.
GR  24.5    4060.    24.7     4180.     24.5      4480.     24.6      4770.     23.9      4880.
GR  25.5    4890.    26.3     4910.

ET          9.1      9.1      9.1       9.1                                     200.      3482.7
X1  23044.  70.      1800.1   2986.7    500.      500.      500.
GR  31.     200.     28.      211.      27.6      460.      26.3      630.      50.       630.1
GR  50.     1800.    26.0     1800.1    26.3      1872.7    25.1      2178.5    25.8      2525.8
GR    26.0    2762.0      26.3    2949.5      28.6    2986.7      25.4    3013.3      26.9    3169.2
GR    27.3    3366.4      35.1    3371.6      36.3    3408.5      27.0    3414.5      25.0    3458.2
GR    30.0    3471.6      31.3    3482.7      29.9    3491.9      27.4    3543.5      25.7    3556.3
GR    27.2    3726.4      27.1    3882.6      28.2    3939.7      27.7    4082.9      28.1    4196.8
GR    28.1    4424.2      27.5    4596.3      27.0    4774.8      27.6    4823.3      27.0    4972.1
GR    26.3    4983.6      26.9    5024.1      27.9    5030.0      27.9    5037.5      27.3    5042.9
GR    26.3    5076.4      26.8    5272.6      26.6    5509.3      26.5    5630.1      28.7    5659.0
GR    26.8    5684.9      27.0    5933.5      27.6    6240.8      27.5    6349.9      27.8    6369.5
GR    28.8    6394.0      27.8    6427.9      28.1    6476.4      45.1    6481.3      45.8    6565.5
GR    55.5    6570.6      63.4    7154.0      56.8    7208.7      32.2    7213.0      33.4    7332.4
GR    33.9    7571.7      37.3    7737.9      35.7    7825.4      66.6    7837.5      65.6    8458.5
GR    38.2    8460.6      37.9    8533.0      40.8    8664.9      41.1    8754.1      41.1    8827.4
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X1  24145.   54.              3254.3    900.      900.      900.
GR    32.7       0.0      28.2      11.6      27.5     344.6      25.9     753.8      25.8    1061.0
GR    25.7    1365.3      26.1    1542.9      25.1    1931.0      27.4    2325.9      28.1    2523.8
GR    28.0    2694.6      29.5    2834.9      29.8    2916.2      40.4    2919.5      41.4    2968.4
GR    30.3    2975.6      30.3    3110.5      30.2    3230.7      34.6    3242.9      34.4    3254.3
GR    34.1    3269.6      30.0    3294.6      30.3    3462.0      30.9    3651.0      30.7    3831.6
GR    30.0    4035.8      29.5    4267.8      29.1    4538.7      30.2    4735.3      30.6    4893.7
GR    31.4    4943.8      30.4    4984.6      31.4    4989.6      31.4    5172.3      32.5    5434.6
GR    33.2    5566.5      33.1    5942.2      33.7    6233.9      33.6    6325.7      33.5    6353.6
GR    32.5    6393.1      33.5    6411.3      34.4    6633.2      37.3    6874.4      39.0    7013.9
GR    40.0    7194.4      41.0    7359.7      42.0    7559.0      41.5    7729.3      43.0    7751.1
GR    41.7    7768.1      42.0    7893.5      42.0    7969.0      42.4    8013.1

X1  25069.   71.              3178.4    700.      700.      700.
GR    35.9       0.0      28.0      29.2      27.4     427.9      27.2     722.7      27.6    1054.9
GR    27.5    1282.2      28.1    1405.5      28.4    1699.9      28.4    2026.7      29.1    2322.1
GR    29.6    2534.4      30.8    2841.1      30.8    3029.5      30.8    3133.9      35.5    3164.1
GR    36.2    3178.4      35.7    3190.4      31.1    3207.9      31.6    3455.2      32.6    3723.7
GR    33.1    3931.1      33.1    4050.9      32.6    4162.6      32.6    4327.0      32.9    4587.3
GR    33.0    4723.6      31.8    4785.6      35.7    4877.6      32.9    5020.4      34.1    5092.9
GR    35.9    5098.2      38.2    5120.3      35.8    5155.4      34.8    5159.5      33.6    5189.6
GR    37.8    5199.8      38.1    5208.7      34.3    5217.3      33.6    5295.8      35.0    5310.1
GR    35.6    5443.7      29.0    5457.1      31.1    5501.6      34.1    5611.9      39.1    5649.5
GR    38.8    5784.0      38.2    5859.2      33.4    5864.1      32.9    5883.2      37.2    5898.3
GR    37.9    5924.6      36.7    5988.0      38.9    6155.9      38.3    6471.1      39.2    6674.1
GR    39.6    6732.2      40.4    6758.5      39.5    6789.4      41.4    6889.2      59.1    6896.5
GR    57.6    7129.8      41.1    7132.4      40.1    7238.4      40.2    7273.3      42.3    7318.6
GR    65.3    7321.9      63.8    7423.0      44.4    7426.9      43.6    7518.2      46.0    7641.2
GR    46.8    7731.0

QT  4.       5620.    5620.   5620.     5620.
X1  26045.   67.              3379.5    800.      800.      800.
GR    36.9       0.0      29.8      37.6      28.8     297.5      29.4     562.8      29.6     723.0
GR    29.5     811.8      30.1     961.2      29.2    1098.6      29.1    1255.6      29.6    1417.7
GR    29.0    1567.0      29.9    1788.6      30.2    1977.4      30.5    2218.8      31.6    2493.8
GR    31.8    2730.8      32.6    3005.0      33.3    3188.4      32.6    3273.7      34.8    3328.2
GR    35.7    3379.5      34.8    3444.5      35.0    3525.9      36.1    3649.1      51.3    3652.3
GR    50.8    3677.1      34.8    3687.3      32.7    3867.8      34.4    3976.7      32.7    4171.2
GR    32.5    4312.5      32.4    4449.4      32.3    4692.3      32.8    5014.0      34.1    5294.3
GR    33.9    5382.4      35.4    5390.7      37.5    5437.5      34.3    5484.0      39.8    5496.1
GR    39.7    5504.7      34.0    5517.8      34.6    5723.4      36.6    5919.2      34.3    5965.7
GR    38.9    5974.2      33.4    6205.9      38.4    6238.5      38.8    6293.1      40.2    6344.9
GR    37.6    6355.9      39.8    6424.0      58.8    6430.5      59.3    6618.4      40.5    6623.2
GR    39.8    6704.3      40.7    6882.8      41.5    6996.9      43.1    7141.2      46.5    7485.2
GR    44.2    7533.7      45.2    7842.6      44.7    8073.3      50.6    8076.9      44.6    8081.7
GR    45.2    8308.3      47.6    8353.8

X1  27601.   57.              3117.1    1400.     1400.     1400.
GR    55.2       0.0      29.2     114.7      30.5     312.3      30.7     531.0      31.2     661.2
GR    31.5     840.1      31.7     988.6      30.9    1103.7      32.3    1211.8  ~~41.6~~    1226.6
GR    33.7    1302.8      42.6    1302.9      32.6    1541.0      33.9    1788.6      33.0    2036.0
GR    35.4    2065.1      33.8    2320.4      37.2    2507.5      36.4    2616.8      31.2    2690.1
GR    37.1    2740.7      37.8    2991.1      38.1    3043.3      31.5    3057.3      38.0    3094.0
GR     38.6    3117.1      37.7    3193.7      36.1    3267.2      33.5    3279.3      36.7    3288.3
GR     36.8    3428.9      37.7    3543.5      53.9    3603.8      45.6    3631.3      54.4    3670.1
GR     52.9    3693.5      38.8    3742.0      39.3    3852.1      37.8    4156.4      36.8    4494.4
GR     38.5    4762.4      40.1    5123.1      39.9    5307.5      39.2    5470.4      40.5    5531.1
GR     40.7    5637.6      42.7    5956.7      61.2    5967.2      61.0    6022.7      43.8    6026.9
GR     44.2    6332.0      44.6    6570.3      65.3    6591.8      63.9    6686.9      44.6    6710.7
GR     47.1    7066.5      65.4    7088.7

X1   27832.   25.                5626.8    225.        225.        225.
GR     34.2       0.0      35.0     122.6      35.2     351.3      35.9     647.5      36.3     906.3
GR     36.4    1173.8      37.2    1372.0      37.6    1639.7      38.1    1847.8      39.2    2058.4
GR     41.4    2342.9      46.7    2652.2      53.9    2901.1      58.3    3210.        38.      3230.
GR   38.5     3270.      38.       3310.      59.         3330.      46.2       4051.6     43.2       4351.1
GR     43.3    4642.4      43.5    4925.3      44.1    5196.3      44.5    5420.2      44.9    5626.8

X1   28344.   39.                4965.6    200.        200.        200.
GR     53.9       0.0      32.1      50.1      32.6     253.0      33.9     500.5      34.7     755.1
GR     35.3    1029.7      35.8    1309.4      36.3    1596.9      34.6    1868.5      36.8    2020.2
GR     37.0    2063.0      49.8    2082.4      48.2    2120.9      36.5    2125.9      36.6    2173.1
GR     36.4    2499.3      36.3    2755.9      37.0    2913.3      39.5    3042.0      38.4    3213.1
GR     37.7    3305.0      39.6    3368.9      39.3    3424.1      38.7    3466.9      56.9    3472.9
GR     56.3    3504.3      38.9    3510.4      38.6    3679.4      40.2    3901.8      40.8    3960.0
GR     59.1    3963.2      58.9    3984.2      40.7    4009.6      41.0    4203.0      40.4    4425.1
GR     40.7    4633.2      40.3    4743.8      41.1    4869.2      41.3    4965.6

X1   28871.   45.                3621.8    1250.       1250.       1250.
GR     49.7       0.0      41.0      27.7      42.5      63.8      44.0     117.8      40.9     173.6
GR     40.8     495.4      40.5     806.6      39.8     991.9      41.3    1061.6      41.4    1284.8
GR     41.1    1458.5      40.4    1499.8      41.4    1530.8      41.3    1689.9      41.1    1845.3
GR     39.3    1878.4      41.0    1919.8      41.4    2090.8      39.8    2131.4      41.1    2192.6
GR     40.7    2254.0      60.1    2260.3      59.0    2366.3      41.8    2377.3      41.6    2462.5
GR     50.7    2464.5      51.0    2530.2      42.4    2535.5      41.3    2683.9      51.3    2693.7
GR     43.2    2708.0      42.2    2726.1      55.2    2729.3      55.0    2758.6      41.5    2766.6
GR     41.3    2805.7      68.1    2812.2      67.7    2895.8      41.1    2907.0      40.2    3069.3
GR     39.7    3220.3      40.8    3366.2      41.9    3472.5      41.9    3556.6      43.1    3621.8

X1   29887.   26.                3376.1    1150.       1150.       1150.
GR     53.8       0.0      45.1      29.3      46.4      67.2      44.0     234.6      44.1     429.9
GR     43.2     631.9      45.4     707.7      43.1     753.9      45.2     963.6      44.4    1233.7
GR     44.3    1468.4      44.1    1678.0      43.0    1902.4      44.9    1942.9      42.4    1991.4
GR     43.7    2201.8      42.9    2449.0      42.0    2776.8      43.1    2940.6      42.0    2996.0
GR     43.5    3024.0      41.3    3064.2      42.9    3198.7      40.7    3283.3      44.7    3313.4
GR     46.3    3376.1

QT   4.       5770.     5770.    5770.     5770.
X1   31062.   28.                3650.7    1100.       1100.       1100.
GR     53.6       0.0      48.8      23.8      51.4      64.4      48.4     119.3      46.4     408.3
GR     46.4     659.9      46.7     910.9      45.8    1264.7      44.8    1520.5      44.9    1662.3
GR     46.1    1906.5      48.0    1948.0      46.0    1991.7      46.4    2061.9      60.0    2066.1
GR     66.8    2118.6      66.1    2247.5      46.3    2256.8      45.0    2497.9      45.1    2695.1
GR     45.0    3006.3      47.6    3058.8      47.0    3259.6      46.5    3458.6      45.3    3575.5
 R     50.4    3608.9      52.4    3648.3      55.2    3650.7
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X1   32111.   30.                3986.7    1050.     1050.     1050.
GR      57.6      0.0     51.1      13.7      53.6      68.7      50.4     116.7      50.4     302.6
GR      50.5    412.1     48.9     663.9      48.9     913.3      49.3    1160.4      48.3    1410.8
GR      47.0   1663.7     47.5    1809.3      50.1    1912.2      51.0    1940.4      50.1    1963.5
GR      49.2   2137.7     48.9    2392.2      49.0    2475.9      49.7    2777.2      50.7    3013.9
GR      50.1   3056.5     51.1    3277.5      51.0    3409.5      50.3    3595.3      50.8    3816.4
GR      47.3   3876.9     55.4    3923.2      53.3    3973.1      56.4    3976.7      52.4    3986.7

X1   33412.   33.                4116.9    1500.     1500.     1500.
GR      89.0      0.0     55.0      64.2      55.8     342.8      53.9     612.6      52.5     890.8
GR      52.2   1021.0     52.2    1208.2      53.0    1362.4      54.9    1618.7      52.3    1813.7
GR      51.8   1861.1     52.9    1896.6      51.7    1949.4      48.6    1979.8      51.1    2134.8
GR      54.9   2265.9     67.1    2335.4      58.1    2384.6      66.9    2422.3      55.6    2537.6
GR      49.9   2708.8     48.8    2911.8      50.7    2987.4      51.0    3030.5      50.6    3072.3
GR      47.9   3191.2     46.8    3445.0      47.6    3648.3      53.1    3758.7      69.3    3885.9
GR      45.6   4012.6     45.0    4045.3      69.8    4116.9

X1   33532.   28.                5172.5    100.      100.      100.
GR   68.6               67.3     248.9     64.9      449.9     63.1      669.5     60.6      935.8
GR   58.      1263.4    56.5     1543.8    61.3      1791.5    67.3      1967.9    71.1      2220.
GR   52.      2221.     53.      2275.     52.       2330.     72.3      2331.     71.4      2614.2
GR   70.9     2896.     70.6     3330.     50.8      3331.     51.3      3405.     50.8      3480.
GR   70.7     3669.4    70.8     3929.4    71.3      4243.     71.2      4487.8    71.4      4662.2
GR   73.1     4765.4    72.5     4981.5    73.3      5172.5

X1   33658.   30.                4284.4    100.      100.      100.
GR      90.3      0.0     54.3      67.2      54.8     288.3      55.0     482.0      55.1     667.9
GR      54.6    809.5     54.7    1022.1      55.9    1217.4      53.3    1322.1      60.7    1407.4
GR      55.4   1457.3     52.7    1657.8      52.4    1830.0      54.1    1879.0      52.3    1913.0
GR      53.5   2070.6     50.5    2255.7      50.7    2477.1      49.4    2738.8      49.5    2960.0
GR      51.6   3023.7     50.6    3204.8      49.7    3293.7      49.2    3438.1      48.0    3667.0
GR      58.1   3891.8     70.7    4010.2      45.8    4132.6      48.4    4235.0      70.5    4284.4
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                                                                     THIS RUN EXECUTED 19MAY95    16:49:39
**************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
**************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


COY-GUA SWALE WEST

SUMMARY PRINTOUT TABLE  150


      SECNO      XLCH      ELTRD     ELLC      ELMIN       Q       CWSEL     CRIWS      EG      10*KS      VCH       AREA     .

       .000       .00       .00       .00       3.00   7680.00     4.70       .00      4.94     47.16      4.05    1973.46  111

*     1.000    130.00       .00       .00       5.10   7680.00     6.60      6.60      7.10    147.43      6.29    1359.78   63

*     2.000    110.00       .00       .00       3.00   7680.00     7.22       .00      7.26      3.60      1.57    4573.07  404

*     3.000    350.00       .00       .00       4.20   7680.00     7.38       .00      7.46      8.47      2.22    3536.17  263

      4.000    550.00       .00       .00       5.00   6932.00     7.94       .00      8.03     13.18      2.51    2985.02  190

*     5.000    550.00       .00       .00       3.00   2380.00     9.90       .00      9.90       .04       .20   10163.00 1177

      6.000    600.00       .00       .00       3.50   2380.00     9.90       .00      9.90       .06       .22    9008.68  988

*     7.000    520.00       .00       .00       7.00   2380.00     9.91       .00      9.91       .35       .43    5107.02  401

*     8.000    550.00       .00       .00       7.00   2380.00     9.94       .00      9.95      1.60       .61    3027.76  188

*     9.000    500.00       .00       .00       8.00   2380.00    10.06       .00     10.09      5.35      1.02    2071.93  102

*    10.000    500.00       .00       .00       9.00   2380.00    10.43       .00     10.47     11.29      1.71    1555.76   70

     11.000    500.00       .00       .00      10.00   2380.00    11.05       .00     11.09     13.89      1.56    1522.15   63

     12.000    500.00       .00       .00      10.00   2380.00    11.84       .00     11.92     19.32      2.25    1097.40   54

     13.000    500.00       .00       .00      12.00   2380.00    13.05       .00     13.14     31.66      2.46    1041.14   42

*    14.000    500.00       .00       .00      13.00   2380.00    14.18       .00     14.23     15.82      1.84    1388.97   59

     15.000    500.00       .00       .00      13.00   2380.00    14.93       .00     14.99     14.67      2.18    1287.29   62

     16.000    500.00       .00       .00      14.00   2380.00    15.89       .00     16.01     28.89      3.18     894.29   44
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        SECNO     XLCH    ELTRD    ELLC    ELMIN        Q    CWSEL   CRIWS      EG    10*KS     VCH     AREA    .

*      17.000   500.00     .00      .00    14.00  2380.00    16.59     .00   16.63     6.72    1.75  1502.51   91

       18.000   500.00     .00      .00    15.00  2380.00    16.92     .00   16.96     6.43    1.65  1584.48   93

*      19.000   500.00     .00      .00    14.60  2380.00    17.16     .00   17.18     3.10    1.24  2025.26  135

*      20.000   500.00     .00      .00    14.70  2380.00    17.41     .00   17.49    15.02    1.59  1130.88   61

*      21.000   500.00     .00      .00    15.00  2380.00    17.88     .00   17.91     5.34     .82  1760.36  102

*      22.000   500.00     .00      .00    16.00  2380.00    18.27     .00   18.33    14.30    1.35  1328.44   62

       23.000   500.00     .00      .00    16.00  2380.00    18.84     .00   18.89     9.14    1.18  1410.36   78

*      24.000   500.00     .00      .00    16.50  2380.00    19.46     .00   19.54    19.01    1.74  1131.47   54

*      25.000   600.00     .00      .00    17.00  2380.00    20.05     .00   20.09     5.31    1.47  1653.89  103

*      26.000   600.00     .00      .00    18.00  2380.00    20.50     .00   20.54    11.60    1.61  1400.24   69

       27.000   600.00     .00      .00    19.00  2380.00    21.26     .00   21.32    14.32    2.05  1199.66   62

*      28.000   500.00     .00      .00    20.00  2380.00    22.28     .00   22.38    33.53    2.62  1016.47   41

    21837.000   200.00     .00      .00    23.00  2380.00    25.68   25.68   25.98   166.88    4.40   540.69   18

*   21920.000    80.00     .00      .00    24.00  2380.00    26.59   26.59   27.17    76.30    6.83   425.95   27

*   22082.000   145.00     .00      .00    21.20  2380.00    27.23     .00   27.23      .07     .34  7708.39  875

*   22550.000   500.00     .00      .00    23.90  2380.00    27.23     .00   27.24      .76     .90  3043.42  273

*   23044.000   500.00     .00      .00    25.00  2380.00    27.29     .00   27.31     3.26    1.18  2123.34  131

    24145.000   900.00     .00      .00    25.10  2380.00    27.51     .00   27.52     1.68     .82  2904.22  183

*   25069.000   700.00     .00      .00    27.20  2380.00    27.97   27.97   28.20   172.57    3.88   612.93   18

*   26045.000   800.00     .00      .00    28.80  5620.00    30.64     .00   30.72    20.25    2.34  2396.78  124

    27601.000  1400.00     .00      .00    29.20  5620.00    32.84     .00   32.95    12.74    2.60  2163.52  157

*   27832.000   225.00     .00      .00    34.20  5620.00    36.55   36.55   37.00   144.44    5.38  1044.03   46

*   28344.000   200.00     .00      .00    32.10  5620.00    37.16     .00   37.17     1.97    1.06  5305.10  400

*   28871.000  1250.00     .00      .00    39.30  5620.00    41.24   41.24   41.56   161.90    4.58  1227.97   44

*   29887.000  1150.00     .00      .00    40.70  5620.00    44.50     .00   44.55    10.03    1.75  3216.80  177

*   31062.000  1100.00     .00      .00    44.80  5770.00    46.48     .00   46.62    44.20    2.99  1929.17   86
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     SECNO      XLCH     ELTRD      ELLC     ELMIN         Q     CWSEL     CRIWS        EG    10*KS       VCH      AREA    .

   32111.000  1050.00       .00       .00     47.00   5770.00     49.84       .00     49.94    23.69      2.47   2332.12  118

*  33412.000  1500.00       .00       .00     45.00   5770.00     51.13       .00     51.18     4.13      1.82   3175.10  283

*  33532.000   100.00       .00       .00     50.80   5770.00     54.04     54.04     55.21   104.94      8.69    664.06   56

*  33658.000   100.00       .00       .00     45.80   5770.00     55.33       .00     55.34      .20       .48  11951.32 1293
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COY-GUA SWALE WEST

SUMMARY PRINTOUT TABLE  150

       SECNO        Q     CWSEL    DIFWSP    DIFWSX    DIFKWS    TOPWID     XLCH

        .000  7680.00      4.70       .00       .00       .00   1339.60      .00

*      1.000  7680.00      6.60       .00      1.90       .00   1382.03   130.00

*      2.000  7680.00      7.22       .00       .62       .00   1587.05   110.00

*      3.000  7680.00      7.38       .00       .16       .00   1648.92   350.00

       4.000  6932.00      7.94       .00       .56       .00   1407.34   550.00

*      5.000  2380.00      9.90       .00      1.96       .00   2360.00   550.00

       6.000  2380.00      9.90       .00       .00       .00   2353.77   600.00

*      7.000  2380.00      9.91       .00       .00       .00   2090.88   520.00

*      8.000  2380.00      9.94       .00       .03       .00   1847.78   550.00

*      9.000  2380.00     10.06       .00       .13       .00   1692.22   500.00

*     10.000  2380.00     10.43       .00       .36       .00   1667.76   500.00

      11.000  2380.00     11.05       .00       .63       .00   1647.20   500.00

      12.000  2380.00     11.84       .00       .79       .00    958.17   500.00

      13.000  2380.00     13.05       .00      1.21       .00   1211.25   500.00

*     14.000  2380.00     14.18       .00      1.13       .00   1476.52   500.00

      15.000  2380.00     14.93       .00       .75       .00   1125.00   500.00

      16.000  2380.00     15.89       .00       .95       .00    916.15   500.00

*     17.000  2380.00     16.59       .00       .71       .00    998.42   500.00

      18.000  2380.00     16.92       .00       .33       .00   1056.28   500.00

*     19.000  2380.00     17.16       .00       .23       .00   1179.26   500.00

*     20.000  2380.00     17.41       .00       .26       .00    967.38   500.00

*     21.000  2380.00     17.88       .00       .46       .00   1406.05   500.00

*     22.000  2380.00     18.27       .00       .40       .00   1417.26   500.00

      23.000  2380.00     18.84       .00       .57       .00   1216.96   500.00
```

```
     SECNO        Q        CWSEL    DIFWSP    DIFWSX    DIFKWS    TOPWID     XLCH

*     24.000   2380.00     19.46       .00       .62       .00   1100.49    500.00

*     25.000   2380.00     20.05       .00       .59       .00   1173.87    600.00

*     26.000   2380.00     20.50       .00       .44       .00   1224.75    600.00

      27.000   2380.00     21.26       .00       .76       .00   1053.86    600.00

*     28.000   2380.00     22.28       .00      1.03       .00   1343.39    500.00

*  21837.000   2380.00     25.68       .00      3.39       .00    947.54    200.00

*  21920.000   2380.00     26.59       .00       .91       .00    361.33     80.00

*  22082.000   2380.00     27.23       .00       .64       .00   2347.76    145.00

*  22550.000   2380.00     27.23       .00       .00       .00   1393.14    500.00

*  23044.000   2380.00     27.29       .00       .06       .00   1711.74    500.00

   24145.000   2380.00     27.51       .00       .22       .00   2017.43    900.00

*  25069.000   2380.00     27.97       .00       .46       .00   1329.62    700.00

*  26045.000   5620.00     30.64       .00      2.67       .00   2221.39    800.00

   27601.000   5620.00     32.84       .00      2.20       .00   1213.37   1400.00

*  27832.000   5620.00     36.55       .00      3.71       .00   1211.86    225.00

*  28344.000   5620.00     37.16       .00       .60       .00   2820.91    200.00

*  28871.000   5620.00     41.24       .00      4.08       .00   1983.68   1250.00

*  29887.000   5620.00     44.50       .00      3.26       .00   2736.55   1150.00

*  31062.000   5770.00     46.48       .00      1.98       .00   2228.53   1100.00

   32111.000   5770.00     49.84       .00      3.36       .00   2242.69   1050.00

*  33412.000   5770.00     51.13       .00      1.28       .00   1307.91   1500.00

*  33532.000   5770.00     54.04       .00      2.92       .00    289.22    100.00

*  33658.000   5770.00     55.33       .00      1.29       .00   3698.09    100.00
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 SUMMARY OF ERRORS AND SPECIAL NOTES


CAUTION SECNO=      1.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=      1.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=      1.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=      2.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      3.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

NOTE    SECNO=      5.000  PROFILE=  1  WSEL BASED ON X5 CARD
WARNING SECNO=      5.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      7.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      8.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=      9.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     10.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     14.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     17.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     19.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     20.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     21.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     22.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     24.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     25.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     26.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     28.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=  21837.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  21837.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  21837.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

CAUTION SECNO=  21920.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  21920.000  PROFILE=  1  MINIMUM SPECIFIC ENERGY

WARNING SECNO=  22082.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  22550.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  23044.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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CAUTION SECNO=  25069.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  25069.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  25069.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=  26045.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=  27832.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  27832.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  27832.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=  28344.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=  28871.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  28871.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  28871.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=  29887.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  31062.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=  33412.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=  33532.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=  33532.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=  33532.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=  33658.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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DECK 1

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********************************************                                                ******************************
*  HEC-2 WATER SURFACE PROFILES            *                                                *  U.S. ARMY CORPS OF ENGINEERS
*                                          *                                                *  HYDROLOGIC ENGINEERING CENTE
*  Version   4.6.2;  May 1991              *                                                *  609 SECOND STREET, SUITE D
*                                          *                                                *  DAVIS, CALIFORNIA 95616-4687
*  RUN DATE    26JUN95    TIME   14:58:13  *                                                *          (916) 756-1104
********************************************                                                ******************************




                                            X     X  XXXXXXX   XXXXX              XXXXX
                                            X     X  X        X     X            X     X
                                            X     X  X        X                        X
                                            XXXXXXX  XXXX     X          XXXXX    XXXXX
                                            X     X  X        X                  X
                                            X     X  X        X     X            X
                                            X     X  XXXXXXX   XXXXX             XXXXXXX
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                                                                        THIS RUN EXECUTED 26JUN95    14:58:13
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************


 T1      SCHAAF & WHEELER
 T2      REVISED NORTH SAN JOSE FLOODPLAIN W/O COYOTE SPILL
 T3      50% BLOCKAGE CONDITIONS, 100-YEAR - DECK 1

 J1  ICHECK     INQ       NINV      IDIR      STRT      METRIC    HVINS     Q          WSEL      FQ

            2.                                                                      5.6

 J2  NPROF      IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW        CHNIM     ITRACE

  -1.      0.        -1.                                                                 15.


 J3  VARIABLE CODES FOR SUMMARY PRINTOUT

  38.       39.        43.        27.        53.        21.        22.        54.        28.        4.
  5.        3.         1.         38.        39.        43.        26.        25.        7.     4   2.
  8.        61.        3.         50.        51.        1.

 NC   .045     .045       .045
 QT   3.       2270.      2270.      2270.
 NC   .09      .09        .09
        STARTING WSEL FROM ROUTING THROUGH STORAGE-ELEVATION CURVE
        CENTER LINE AT 10000., USUALLY ON FIRST ST
 X1   100.0    15.0       9363.9     10357.7
 GR   1.0      8048.8     .4         8176.0     1.0        8297.9     1.4        8874.1     1.9        9114.7
 GR   2.5      9233.0     1.7        9363.9     .9         9758.3     1.2        10000.0    1.0        10095.9
 GR   1.7      10357.7    2.7        10585.5    3.2        10710.0    3.2        10859.3    3.5        11128.2

 NC   .09      .09        .09
 X1   102.0    27.0       9609.0     10358.7    709.5      503.5      618.3
 GR   5.2      7271.4     -.4        7291.4     .8         8064.2     1.9        8079.5     1.9        8082.9
 GR   -.8      8099.6     -1.2       8158.1     -1.3       8359.7     -.9        8409.3     -.6        8700.3
 GR   1.0      8801.2     -.7        8923.9     -.7        9113.5     -.7        9609.0     .9         9862.5
 GR   .5       10000.0    .7         10112.0    1.3        10358.7    3.2        10387.1    3.4        10551.3
 GR   4.9      10904.2    4.9        11015.4    3.7        11429.7    2.8        11444.9    1.8        11453.1
 GR   1.8      11469.5    9.9        11491.5
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ET             5.1                           7370.     11950.
NC   .09       .09       .09
X1   104.0     35.0      9964.2    10474.5   742.9     485.3     579.6
GR   4.7       7092.4    .5        7108.8    .1        7507.5    .5        7768.6    .8        8456.6
GR   1.9       8475.1    1.9       8479.4              8496.7    .2        8925.5    1.0       8936.8
GR   1.0       8960.4    .8        8972.4    .3        9095.3    .6        9099.4    .6        9103.8
GR             9108.6              9113.6    .2        9116.0    .3        9662.8    .3        9933.6
GR   .4        9944.4    .4        9957.4    .6        9964.2    .2        9974.6    .4        10000.0
GR   .8        10253.5   .9        10474.5   1.9       10701.7   2.4       10916.2   5.4       10963.6
GR   5.4       11315.4   3.0       11782.4   3.4       12242.4   2.2       12283.9   4.1       12960.0

ET             5.1                           7440.     12250.
NC   .09       .09       .09
X1   106.0     44.0      9956.0    10533.9   507.4     633.6     619.2
GR   5.0       6858.7    5.0       6861.2    .7        6873.9    .8        7439.1    1.1       7666.8
GR   1.2       8203.2    2.0       8226.2    2.2       8252.8    .2        8267.5    .3        8767.1
GR   .2        8855.3    1.4       8864.5    1.4       8866.4    .8        8874.5    .6        8887.7
GR   .3        9379.4    2.2       9409.0    2.9       9425.7    2.3       9451.5    1.9       9466.5
GR   10.6      9466.9    10.3      9579.6    2.6       9580.7    2.6       9598.8    10.5      9600.1
GR   10.7      9616.6    3.7       9617.0    .7        9934.0    .4        9944.5    .3        9956.0
GR   1.2       9970.2    1.3       10000.0   1.2       10107.4   2.3       10533.9   3.3       10856.0
GR   4.9       11253.3   4.2       11738.6   2.9       11747.7   2.9       11751.4   4.1       11755.9
GR   4.0       11902.6   4.3       12299.6   3.9       12333.0   4.5       12789.8

ET             5.1                           7450.     12000.
NH   3.        .09       8604.     .045      9665.6    .09       14144.
X1   108.0     47.0      9654.6    10331.9   759.5     791.9     811.1
GR   5.7       6818.1    5.7       6822.1    .8        6832.0    1.5       7086.8    1.4       7634.2
GR   1.3       7666.1    .7        8179.1    3.0       8210.7    2.2       8218.3    2.3       8258.9
GR   2.3       8276.7    1.4       8287.3    .9        8551.1    2.2       8604.0    2.3       8690.6
GR   2.0       8723.4    2.0       8739.8    2.9       8791.7    31.6      8803.7    31.6      9162.0
GR   2.8       9169.9    2.6       9219.7    1.9       9332.7    3.3       9422.9    38.3      9436.1
GR   38.3      9576.1    3.1       9586.5    2.4       9654.6    1.1       9665.6    1.4       10000.0
GR   1.4       10048.8   1.2       10331.9   1.8       10555.7   2.7       10838.4   3.9       11236.5
GR   3.9       11268.3   2.6       11277.6   2.6       11292.1   4.4       11301.9   4.4       11598.1
GR   4.4       12007.1   5.5       12560.3   5.8       12701.1   6.2       13022.8   6.3       13350.5
GR   8.5       14126.7   9.0       14144.0

ET             5.1                           7560.     11890.
NH   3.        .09       8212.2    .045      9971.6    .09       14149.4
X1   110.0     52.0      9206.5    10308.5   722.4     679.2     236.1
GR   15.5      5594.7    15.5      5618.0    .4        5655.9    .7        5830.3    1.4       5868.6
GR   7.2       5936.8    5.0       6234.0    5.3       6586.4    5.6       6930.0    3.7       7323.1
GR   3.7       7597.9    2.9       7799.0    2.3       8212.2    2.3       8340.     30.       8341.
GR   30.       8470.     2.3       8471.     2.3       8710.     30.       8711.     30.       9000.
GR   2.3       9001.     2.3       9206.5    2.3       9340.     30.       9341.     30.       9450.
GR   2.3       9451.     2.3       9660.     30.       9661.     30.       9820.     2.3       9821.
GR   2.3       9971.6    1.7       10000.0   .9        10063.2   1.1       10308.5   1.6       10440.7
GR   3.1       10990.4   1.6       11019.6   1.8       11042.8   4.2       11051.8   3.4       11061.0
GR   3.6       11101.1   4.2       11300.4   6.3       12399.2   6.2       12423.4   5.8       12436.8
GR   6.2       12575.5   6.4       12581.3   6.4       12592.3   6.8       13343.4   7.9       14127.2
GR   9.2       14136.2   9.3       14149.4
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ET            5.1                                7580.       11850.
NH    3.      .09         8177.      .045        9910.       .09         14156.3
X1    112.0   86.0        9910.0     10329.9     486.3       505.4       49.1
GR    15.3    5612.0      15.3       5622.9      5.0         5648.7      4.8         5675.0     8.8        5689.6
GR    8.8     5716.8      5.5        5766.4      -5.5        5822.7      .5          5853.0     .1         5979.8
GR    1.6     5996.8      1.6        6020.1      -2.6        6032.3      1.6         6046.0     3.2        6228.7
GR    5.9     6237.4      3.8        6888.7      5.9         6913.2      5.8         6950.3     3.3        7044.5
GR    2.8     7289.2      3.4        7454.1      3.4         7666.5      3.2         7798.2     2.6        7859.8
GR    2.0     8177.0      1.4        8186.4      1.4         8231.4      1.7         8238.1     2.5        8252.0
GR    2.63    8320.       30.        8321.       30.         8400.       30.         8480.      2.95       8481.
GR    3.0     8507.9      2.6        8509.5      2.6         8533.0      2.6         8535.6     2.7        8588.2
GR    2.2     8591.3      2.2        8613.6      2.4         8617.2      2.8         8690.      30.        8691.
GR    30.     8990.       3.39       8991.       3.3         9055.5      2.4         9175.6     1.6        9194.1
GR    1.6     9235.5      2.0        9253.7      3.7         9287.9      3.61        9330.      30.        9331.
GR    30.     9450.       3.35       9451.       3.0         9616.2      3.0         9630.      30.        9631.
GR    30.     9700.       30.        9750.       30.         9800.       30.         9820.      30.        9830.
GR    3.0     9831.       3.0        9910.0      2.7         9968.8      1.4         10000.0    .9         10053.3
GR    .9      10329.9     1.3        10469.0     2.3         11091.7     .9          11094.9    .9         11098.0
GR    3.6     11104.9     3.6        11134.0     4.0         11261.0     5.9         11913.6    6.4        12463.9
GR    6.5     12583.4     6.6        12585.7     6.4         12906.5     8.0         14140.2    9.6        14145.1
GR    9.6     14156.3

ET            5.1                                7520.       11650.
NH    3.      .09         7693.3     .045        9899.5      .09         14219.8
X1    114.0   70.0        9899.5     10011.5     296.2       41.1        253.6
GR    15.9    5505.7      15.5       5512.3      3.4         5541.3      3.5         5824.3     7.4        5839.1
GR    4.7     6349.2      6.4        6425.4      4.5         6841.6      4.3         7112.0     3.1        7127.3
GR    3.3     7200.3      3.3        7212.3      1.0         7239.0      1.7         7594.9     1.7        7693.3
GR    2.6     8275.3      3.0        8298.2      21.9        8305.8      21.9        8478.1     3.0        8482.6
GR    1.7     8529.3      2.9        8658.6      5.1         8664.8      5.1         8688.1     24.5       8691.9
GR    24.5    8997.6      4.7        8998.5      3.7         9022.4      2.1         9138.6     3.4        9152.0
GR    2.4     9169.4      2.0        9174.9      1.7         9219.5      3.4         9225.8     3.1        9249.2
GR    2.2     9254.4      3.1        9313.7      36.6        9322.2      36.6        9568.0     2.9        9575.1
GR    3.0     9639.2      35.9       9645.8      35.8        9886.2      4.2         9899.5     1.9        9972.6
GR    1.7     10000.0     1.6        10009.5     .2          10011.5     .4          10017.5    1.7        10019.0
GR    1.1     10265.8     1.6        10948.3     2.8         11107.6     2.5         11262.7    2.1        11280.3
GR    2.1     11296.7     3.4        11303.4     4.0         11350.4     6.3         11768.8    6.9        11947.1
GR    7.5     12236.5     7.7        12608.9     7.7         12643.9     7.7         12667.3    7.4        13084.7
GR    8.3     13610.9     8.7        14103.2     8.7         14196.7     9.6         14208.7    10.2       14219.8

ET            5.1                                8040.       11470.
NH    3.      .09         8582.6     .045        9184.3      .09         14308.
X1    116.0   73.0        9969.8     11170.4     592.9       957.2       597.1
GR    15.4    6043.3      15.4       6049.9      3.9         6074.4      1.7         6114.6     2.5        6328.9
GR    3.8     6364.8      6.8        6376.7      4.4         6882.5      5.7         6936.3     5.3        7246.6
GR    4.6     7555.9      4.4        7648.6      2.7         7661.4      3.3         7673.3     3.3        7735.0
GR    3.4     7737.1      3.4        7746.7      1.4         7778.5      1.7         7998.1     2.5        8169.8
GR    2.8     8179.1      2.5        8195.3      1.7         8202.8      2.8         8582.6     3.5        8690.0
GR    4.1     8691.1      4.1        8701.1      21.5        8709.3      22.0        9002.0     4.9        9017.8
GR    4.4     9045.3      3.6        9046.6      2.6         9146.1      2.8         9147.4     2.7        9181.9
GR    2.3     9184.3      2.3        9220.5      2.8         9221.8      2.8         9233.0     2.3        9235.4
GR    2.0     9404.7      3.5        9664.1      4.9         9754.4      3.9         9969.8     2.5        9980.0
GR    2.8     10000.0     1.2        10697.2     3.8         11170.4     4.4         11455.8    4.2        11465.8
GR   3.4      11471.1   5.8       12016.8   6.4       12104.9   6.9       12112.0   8.7       12707.0
GR   8.9      12710.7   8.9       12721.4   8.4       12724.3   8.4       12889.5   8.4       13110.6
GR   8.3      13366.8   8.4       13506.0   8.9       13765.1   9.4       13910.2   9.7       13915.5
GR   10.0     13923.3   9.3       13929.0   9.5       14110.7   10.3      14274.8   10.8      14279.9
GR   11.0     14293.5   10.7      14305.0   10.       14308.0

ET            5.1                           8250.     11250.
NC   .09      .09       .09
        HWY 237
X1   118.0    42.0      9752.8    10375.3   698.4     755.0     656.6
GR   15.3     6133.6    14.2      6712.0    11.7      7209.5    9.1       7720.8    8.7       7971.6
GR   6.9      8190.2    5.2       8398.6    5.7       8798.5    5.7       8909.3    5.3       8913.8
GR   5.0      9174.4    5.0       9365.1    6.0       9559.4    5.9       9752.8    6.0       9949.5
GR   5.8      10000.0   5.9       10090.8   6.1       10375.3   6.3       10691.7   6.4       11242.7
GR   6.6      11439.3   6.6       11555.7   7.0       11781.8   7.8       12105.6   9.7       12587.3
GR   10.6     12736.4   11.2      13014.5   11.9      13265.7   12.3      13510.3   12.8      13805.8
GR   13.1     14075.5   13.7      14374.7   13.5      14655.6   13.7      14980.7   14.1      15201.3
GR   14.9     15284.1   16.5      15854.9   18.2      16173.3   22.0      16571.0   25.4      16957.5
GR   28.2     17295.8   29.5      17560.0

ET            5.1                           8338.4    11360.
NC   .09      .09       .09
X1   120.0    90.0      9935.9    10829.8   890.9     1001.1    361.1
GR   8.1      8334.2    8.1       8338.4    4.5       8360.2    4.5       8369.3    3.8       8370.4
GR   4.9      8408.1    3.0       8464.0    3.0       8497.4    2.7       8625.5    3.3       8731.1
GR   4.1      8844.6    3.1       8969.4    2.7       9122.5    2.7       9267.6    3.6       9667.5
GR   2.6      9823.2    1.9       9895.7    3.3       9935.9    3.3       9961.3    3.4       10000.0
GR   3.8      10364.0   3.8       10829.8   4.3       11209.0   4.3       11422.4   4.3       11859.9
GR   4.8      12208.2   6.3       12235.3   6.9       12248.2   5.9       12253.9   5.6       12282.2
GR   7.1      12478.0   8.9       12959.6   10.5      13283.5   11.0      13670.4   11.8      14183.2
GR   12.4     14375.6   10.1      14386.6   9.5       14402.7   13.8      14416.5   13.9      14493.4
GR   11.0     14512.5   10.7      14642.0   12.6      14658.8   13.5      14714.4   21.6      14748.2
GR   21.6     14754.7   19.0      14763.4   18.9      15078.2   18.2      15087.5   18.3      15125.6
GR   30.3     15129.8   30.3      15209.8   18.2      15220.1   18.5      15275.2   20.7      15303.0
GR   20.5     15368.0   14.3      15433.4   14.3      15443.9   21.3      15484.6   21.5      15492.6
GR   19.0     15500.0   20.0      15555.7   46.7      15560.2   46.7      15937.2   20.0      15947.6
GR   18.7     16003.9   22.5      16011.7   22.0      16019.2   15.6      16057.9   14.1      16162.7
GR   10.4     16196.1   9.6       16212.6   9.6       16338.7   10.4      16359.8   15.6      16386.5
GR   15.8     16482.3   19.9      16508.6   19.4      16549.5   16.4      16576.3   17.7      16944.5
GR   20.3     17012.6   18.2      17087.2   15.9      17398.8   18.0      17412.0   17.8      17430.7
GR   26.2     17534.9   25.6      17608.9   9.5       17673.8   9.5       17710.2   11.2      17722.5

ET            5.1                           9000.     11860.
NH   2.       .045      9608.36   .09       11540.24
        VISTA MONTANA/HEADQUARTERS DRIVE
X1   122.0    81.0      9928.5    10054.3   1500.     600.      1181.5    .707
GR   6.2      8446.9    5.6       8486.8    5.8       8564.0    4.2       8570.2    3.5       8616.9
GR   5.9      8678.2    5.5       8863.4    4.6       8877.6    4.4       8879.3    4.5       8916.3
GR   5.3      8917.8    6.4       9063.6    6.6       9190.3    7.5       9215.8    6.4       9229.1
GR   4.8      9232.3    4.6       9329.9    6.6       9334.4    7.5       9345.6    7.3       9350.
GR   30.      9351.     30.       9800.     7.5       9801.     7.7       9841.2    7.9       9907.3
GR   6.8      9909.8    6.1       9927.0    6.1       9928.5    7.0       9980.3    7.5       10000.0
GR   7.1      10020.8   6.1       10054.3   6.2       10056.6   7.0       10089.7   5.9       10258.4
GR   5.8      10686.3   5.7       11081.3   5.1       11251.7   5.9       11328.5   5.6       11690.1
GR   6.1      11999.5   6.2       12311.5   6.7       12579.3   8.0       12822.2   12.7      14687.5
GR   12.7     14764.7   13.5      14775.3   13.4      14791.8   12.9      14796.4   12.6      14839.4
GR   11.1     14844.2   11.3      14847.4   13.5      14850.3   13.4      14872.7   11.7      14879.9
GR   11.3     14889.2   12.8      14903.6   14.3      15204.8   14.9      15492.0   14.8      15693.9
GR   20.4     15712.0   20.6      15904.2   47.5      15909.1   47.5      16025.7   20.2      16045.6
GR   20.6     16199.5   48.9      16219.1   48.9      16300.2   20.6      16314.4   18.0      16568.1
GR   19.0     16633.0   19.5      16751.0   16.8      16776.8   18.4      16928.4   19.6      17010.9
GR   22.5     17023.8   23.8      17046.2   25.1      17049.1   25.2      17068.9   9.7       17081.8
GR   9.7      17126.5

ET            5.1                           8930.     11870.
NH   2.       .045      9622.03   .09       11490.98
X1   124.0    46.0      9772.9    10092.0   54.       54.       54.3      .707
GR   3.7      8488.0    3.8       8804.2    4.1       8981.8    3.6       9055.3    4.5       9258.9
GR   4.8      9327.5    4.9       9350.     30.       9351.     30.       9400.     30.       9500.
GR   30.      9600.     30.       9700.     30.       9800.     6.7       9801.     6.8       9914.4
GR   7.5      10000.0   6.8       10041.8   7.1       10092.0   7.1       10121.6   5.1       10225.3
GR   5.6      10372.6   4.7       10632.4   4.7       10661.4   5.0       10895.9   5.0       11010.5
GR   4.9      11245.1   5.4       11510.9   5.2       11641.9   5.9       11696.4   5.1       11858.8
GR   5.0      11879.8   5.6       11919.0   5.3       12019.9   5.9       12100.3   5.7       12247.1
GR   6.0      12319.3   6.0       12387.2   5.5       12441.6   5.9       12613.9   7.1       12735.5
GR   7.2      12768.2   7.8       12770.8   7.8       12795.6   9.6       12799.2   9.6       12809.7
GR   7.7      12811.6

ET            5.1                           8840.     11820.
NH   5.       .09       9150.78   .045      9620.66   .09       9932.37   .045      10438.23  .09
NH   10932.
X1   126.0    65.0      9912.7    10070.4   41.       41.       41.3      .707
GR   6.1      8510.1    5.4       8700.2    5.4       8972.1    5.3       9271.1    4.6       9364.8
GR   4.5      9367.4    4.5       9416.3    5.2       9418.3    5.3       9440.     30.       9441.
GR   30.      9500.     30.       9600.     30.       9700.     30.       9770.     7.3       9771.
GR   7.8      9835.7    8.8       9876.2    9.1       9908.1    7.1       9912.7    6.7       9929.3
GR   7.7      10000.0   6.9       10033.4   6.6       10070.4   6.8       10074.3   6.9       10080.9
GR   7.4      10092.7   5.9       10234.1   6.1       10521.8   5.9       10585.6   5.5       10653.8
GR   5.6      10823.3   4.6       10927.7   4.1       10930.5   4.4       10951.5   4.7       10981.0
GR   4.3      10998.5   4.8       11003.3   5.4       11045.3   5.4       11212.0   6.9       11237.3
GR   5.9      11296.3   4.8       11353.0   5.4       11470.3   5.4       11563.0   6.4       11603.1
GR   32.3     11616.9   32.3      11722.6   6.0       11744.8   6.0       11833.1   5.7       11935.0
GR   5.7      12037.8   6.7       12078.1   7.9       12080.1   8.0       12095.8   32.6      12106.6
GR   32.6     12368.9   6.2       12391.7   6.1       12529.1   5.4       12588.5   6.6       12707.6
GR   7.3      12709.4   7.4       12719.1   10.0      12722.5   10.0      12736.6   7.9       12738.3

ET            5.1       7.1                 7746.2    11595.
NH   2.       .09       8272.14   .045      10467.3
X1   128.0    77.0      9940.8    10052.1   642.1     639.4     611.2     .707
GR   19.0     7746.2    19.0      7753.9    8.2       7780.5    7.4       7933.0    5.8       8490.1
GR   5.3      8501.4    5.1       8503.5    5.4       8540.1    3.1       8545.3    3.1       8568.8
GR   4.9      8571.8    5.7       8639.3    5.7       8660.8    6.1       8671.0    6.1       8694.6
GR   5.2      8848.8    5.6       9194.2    5.5       9353.3    6.1       9369.9    5.4       9437.9
GR   6.4      9497.2    8.1       9565.4    32.1      9577.5    31.9      9825.2    8.3       9827.2
GR   7.9      9863.1    5.7       9902.4    7.8       9907.9    7.1       9940.8    7.2       9974.9
GR   7.3      10000.0   6.1       10050.3   6.9       10052.1   7.9       10071.3   5.5       10092.4
GR   6.8      10150.6   23.8      10156.9   23.8      10389.3   9.8       10393.5   10.3      10419.8
GR   34.2     10425.1   34.2      10589.8   7.3       10591.2   7.3       10600.1   6.3       10604.1
GR  5.5     10659.7   5.8       10661.2   6.0       10668.3   5.6       10670.9   6.5       10726.7
GR  8.4     10735.4   35.4      10737.8   35.4      10913.0   6.8       10916.9   5.6       10975.8
GR  9.8     10993.6   9.8       10998.7   6.7       11009.8   6.2       11014.3   5.3       11017.1
GR  5.5     11054.4   6.1       11055.5   6.4       11081.2   5.5       11085.6   6.2       11142.4
GR  6.8     11144.1   9.3       11158.7   45.4      11162.3   45.4      11280.7   6.2       11288.6
GR  6.4     11359.9   7.9       11365.8   8.3       11375.6   42.6      11378.6   42.4      11544.0
GR  5.9     11557.4   5.4       11595.0

ET          5.1                           7815.8    11000.
NH  2.      .09       8498.85   .045      10871.41
X1  130.0   75.0      9940.9    10059.6   757.2     737.1     790.8     .940
GR  19.4    7810.3    19.4      7815.8    7.5       7852.9    7.4       8273.6    6.6       8474.0
GR  5.6     8499.8    5.1       8542.8    3.4       8549.2    3.4       8568.7    5.6       8572.7
GR  5.1     8624.9    5.0       8661.4    5.5       8770.     30.       8771.     30.       8800.
GR  30.     8970.     6.5       8971.     7.0       9060.2    8.1       9110.6    44.8      9134.3
GR  44.8    9284.1    8.8       9295.7    8.8       9303.4    8.5       9305.6    7.2       9359.9
GR  6.8     9367.3    7.8       9422.4    6.5       9434.2    7.4       9489.2    8.5       9498.3
GR  8.5     9543.6    32.8      9565.3    32.8      9839.5    9.4       9843.0    8.5       9863.6
GR  7.5     9904.4    8.4       9911.6    7.0       9940.9    7.6       9974.8    8.0       10000.0
GR  7.0     10051.4   8.2       10059.6   7.2       10085.3   7.2       10125.4   7.8       10126.7
GR  9.1     10143.0   33.5      10179.8   33.4      10349.6   7.9       10356.5   7.4       10361.0
GR  6.4     10456.4   7.6       10539.1   36.0      10550.6   36.0      10802.7   7.4       10812.0
GR  6.7     10843.0   6.4       10861.8   7.1       10874.7   7.6       10876.2   8.6       10883.4
GR  30.1    10886.9   30.1      11066.8   10.1      11073.3   6.7       11110.3   6.3       11112.0
GR  6.3     11132.8   6.3       11150.0   6.3       11151.7   6.3       11165.3   4.3       11168.8
GR  4.3     11173.8   9.4       11186.9   9.4       11190.2   7.9       11192.2   7.0       11207.4

ET          5.1                           7646.5    10350.
NH  4.      .09       8407.9    .045      8947.     .09       9304.     .045      10505.3
X1  132.0   95.0      9941.1    10051.9   950.      600.      949.6
GR  19.8    7640.5    19.8      7646.5    8.3       7673.0    7.7       7741.9    7.4       8193.0
GR  7.5     8344.9    6.4       8366.6    6.7       8407.9    4.9       8416.5    4.9       8444.8
GR  6.0     8448.3    6.0       8490.7    6.7       8501.8    7.3       8523.3    5.3       8540.4
GR  5.9     8556.9    10.6      8597.2    10.9      8780.4    6.6       8802.0    8.5       8816.4
GR  7.1     8836.0    5.7       8886.6    7.3       8903.9    7.5       8924.7    8.8       8938.4
GR  8.8     8947.0    8.0       8960.3    8.0       9175.7    6.9       9201.5    8.2       9232.8
GR  8.2     9245.5    8.8       9304.0    9.6       9307.6    9.2       9315.1    7.8       9321.8
GR  9.0     9426.3    31.9      9444.9    31.9      9779.5    9.6       9793.0    9.2       9841.2
GR  7.7     9859.8    7.0       9902.0    7.2       9905.9    8.3       9915.1    7.2       9941.1
GR  7.8     9975.0    7.7       10000.0   6.9       10049.4   7.6       10051.9   7.9       10061.0
GR  8.3     10078.2   6.9       10090.7   7.7       10130.6   33.3      10146.9   33.3      10505.3
GR  10.5    10518.6   10.5      10529.1   10.3      10530.3   9.3       10585.8   10.3      10587.9
GR  10.3    10593.0   31.7      10605.1   31.7      10867.9   9.9       10880.2   9.9       10885.5
GR  8.9     10889.5   8.2       10915.7   8.4       10925.8   9.1       10941.6   10.4      10943.8
GR  11.0    10949.2   30.9      10961.0   30.9      11247.6   9.8       11260.3   9.8       11269.4
GR  8.5     11273.6   7.7       11310.8   7.7       11314.3   7.7       11317.7   4.9       11320.7
GR  4.9     11331.0   7.9       11338.7   7.5       11357.3   6.2       11368.8   12.8      13337.4
GR  13.3    13382.5   13.6      13405.2   12.8      13415.7   12.6      13455.9   11.1      13458.4
GR  11.2    13460.9   13.0      13468.5   13.3      13648.2   11.4      13658.9   11.9      13665.3
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ET          5.1                               7670.2      10290.
NH   2.     .09         9270.4      .045      10239.2
X1   134.0  70.0        9907.8      10087.1   260.        200.        173.8
GR   19.8   7663.4      19.8        7670.2    8.7         7701.7      8.2         8077.8      9.2         8312.3
GR   9.0    8365.8      7.6         8378.6    7.6         8417.9      7.2         8443.7      7.2         8485.5
GR   5.1    8489.6      5.1         8509.9    6.8         8524.5      6.8         8556.1      6.8         8558.4
GR   7.9    8594.5      8.4         8903.1    8.3         9013.5      8.3         9247.9      9.0         9270.4
GR   8.8    9334.3      8.4         9367.5    9.2         9383.6      10.1        9476.2      33.3        9485.7
GR   33.3   9830.2      8.9         9833.2    9.4         9876.2      8.3         9903.4      9.4         9907.8
GR   8.5    9943.6      8.8         10000.0   8.7         10044.6     8.2         10087.1     8.8         10148.0
GR   9.6    10158.4     11.5        10239.2   11.5        12404.6     11.5        12439.4     33.2        12456.2
GR   33.2   12575.4     14.4        12582.2   14.4        12593.3     13.6        12595.0     13.0        12689.1
GR   13.2   12693.7     13.0        12727.6   12.7        12730.3     13.0        12843.3     13.8        12846.7
GR   13.8   12856.9     16.1        12870.3   16.1        12877.4     14.6        12892.0     14.0        13023.1
GR   14.6   13060.4     15.4        13067.2   14.9        13071.9     12.7        13080.6     12.9        13123.4
GR   13.6   13132.1     14.0        13150.7   13.2        13154.9     12.4        13200.1     11.3        13205.4
GR   11.3   13206.9     14.8        13219.7   13.6        13249.6     14.5        13635.1     14.9        13959.2

ET          5.1                               7496.7      10250.
NH   3.     .09         8481.7      .045      10067.8     .09         10156.
X1   136.0  95.         9906.8      10048.6   380.        470.        481.1
GR   20.1   7490.5      20.1        7496.7    9.3         7525.2      8.6         8203.7      11.4        8229.2
GR   9.9    8294.7      8.1         8363.4    7.9         8447.5      7.9         8477.5      6.1         8481.7
GR   6.1    8515.4      8.0         8519.6    6.9         8573.4      7.4         8580.0      8.0         8611.0
GR   8.6    8619.6      10.1        8649.3    9.7         8662.1      8.2         8684.3      9.2         8727.0
GR   12.1   8760.5      12.5        8778.3    48.7        8792.7      48.7        8984.3      12.5        8996.1
GR   12.5   9034.7      47.1        9047.2    47.1        9166.0      11.2        9174.4      11.2        9184.9
GR   10.6   9187.9      8.7         9248.3    9.3         9286.8      9.3         9324.6      8.8         9365.6
GR   8.8    9372.6      11.0        9429.5    48.3        9439.1      48.3        9544.2      12.3        9549.8
GR   12.3   9594.5      45.9        9603.0    45.9        9795.2      12.5        9802.6      11.4        9812.9
GR   10.5   9814.7      8.3         9866.1    9.6         9869.5      10.2        9879.1      9.3         9900.2
GR   9.0    9906.8      9.0         9931.5    9.8         10000.0     9.8         10030.5     10.9        10048.6
GR   10.9   10067.8     9.8         10083.6   8.9         10156.0     8.6         10410.8     9.4         10497.4
GR   9.8    10507.5     9.8         10558.2   8.5         10610.5     7.9         10616.1     8.1         10646.1
GR   8.6    10674.5     48.0        10699.1   48.0        10937.6     11.1        10942.5     11.1        10948.0
GR   10.3   10949.5     10.3        10996.1   8.2         11002.5     8.6         11175.1     9.6         11217.4
GR   8.9    11247.2     8.0         11254.6   8.6         11298.7     8.7         11301.6     9.2         11309.1
GR   10.8   11317.7     10.3        11325.2   8.7         11332.7     11.0        11431.5     48.5        11449.5
GR   48.5   11562.2     10.7        11569.9   10.7        11576.2     9.3         11633.9     11.5        11642.1
GR   12.8   11691.8     36.3        11702.2   35.7        11960.4     13.2        11968.0     12.7        12028.4

ET          5.1                               7508.1      10900.
NH   5.     .09         8450.       .045      8855.       .09         9228.3      .045        10360.1     .09
NH   10974. 4
X1   144.0  89.0        9927.2      10065.6   760.        700.        780.
GR   21.2   7502.9      21.2        7508.1    10.1        7538.1      9.6         7671.1      9.0         8146.5
GR   9.0    8426.4      8.6         8450.0    7.9         8492.1      8.3         8494.1      9.1         8518.0
GR   8.5    8524.5      9.4         8574.6    34.9        8593.3      34.9        8772.0      9.5         8782.0
GR   9.2    8855.0      9.2         8934.9    11.2        8964.8      10.6        8989.6      9.2         9030.3
GR   9.2    9143.6      13.3        9155.3    13.2        9199.6      8.5         9228.3      10.5        9355.2
GR   35.0   9364.1      35.0        9745.6    13.0        9750.0      13.0        9757.7      11.3        9760.7
GR   11.3   9768.7      10.2        9769.2    9.9         9817.0      10.0        9889.1      10.8        9891.9
GR   10.8   9918.4      10.1        9927.2    10.4        9968.4      11.0        10000.0     10.0        10057.6
GR   10.1      10065.6   11.1      10087.4   9.3       10121.8   10.3      10200.8   9.6       10360.1
GR   9.6       10431.2   14.1      10442.7   13.6      10460.0   9.1       10471.5   9.3       10508.1
GR   18.1      10527.2   17.4      10556.2   16.2      10562.0   15.9      10583.2   9.6       10614.5
GR   9.3       10671.5   9.3       10693.1   9.6       10730.6   38.5      10752.0   38.5      10974.4
GR   47.8      10981.0   47.8      11155.4   13.0      11160.9   8.8       11253.5   8.8       11308.4
GR   11.4      11312.7   11.4      11321.6   9.4       11328.2   9.4       11573.6   10.1      11618.5
GR   10.7      12129.8   12.6      12251.3   15.2      12264.4   13.5      12369.6   14.0      12415.3
GR   14.2      12421.9   14.5      12433.0   12.9      12437.3   13.6      12481.6   14.6      12496.5
GR   14.6      12500.6   13.1      12548.3   12.2      12554.7   12.2      12557.1   14.4      12570.6
GR   14.9      12586.2   15.1      13068.9   16.5      13734.4   17.6      14502.9

ET             5.1                           7772.5    11400.
NH   3.        .09       8476.7    .045      10020.8   .09       11893.9
X1   146.0     69.0      9940.8    10184.1   499.4     590.      501.0
GR   21.3      7766.2    21.3      7772.5    11.1      7804.2    10.5      7832.0    9.4       8071.9
GR   10.5      8150.3    10.5      8312.1    11.7      8321.4    12.1      8355.7    15.2      8364.8
GR   14.6      8371.1    12.8      8385.8    12.4      8436.8    9.8       8451.4    9.8       8469.1
GR   9.3       8476.7    9.5       8523.8    8.6       8569.0    9.2       8605.9    9.9       8607.6
GR   10.8      8616.4    34.3      8627.3    34.3      8892.1    10.3      8899.6    10.3      8910.0
GR   8.9       8913.7    9.1       8966.9    9.1       8978.3    9.5       9049.3    9.9       9101.5
GR   10.2      9103.0    10.2      9105.7    35.8      9115.6    35.8      9305.0    11.3      9310.3
GR   11.3      9335.7    11.1      9337.6    9.7       9380.2    9.1       9392.6    9.4       9437.5
GR   8.5       9502.2    9.8       9524.9    9.8       9557.0    9.6       9580.3    34.5      9587.6
GR   34.5      9854.6    13.0      9863.9    10.3      9940.8    10.5      9961.5    11.1      10000.0
GR   10.7      10020.8   10.8      10184.1   11.1      10499.5   11.1      10838.8   10.5      11203.5
GR   10.8      11279.7   11.4      11285.2   11.3      11293.7   10.9      11302.9   11.7      11893.9
GR   13.6      12236.0   14.2      12377.9   13.5      12450.4   15.5      12596.6   15.9      12653.1
GR   16.5      13058.5   17.5      13511.8   18.0      13909.4   19.3      14438.1

ET             5.1                           7697.3    11700.
NH   2.        .045      10049.7   .09       14523.
X1   148.0     94.0      9969.1    10019.5   619.3     453.6     552.5
GR   21.5      7690.5    21.2      7697.3    12.5      7723.2    12.1      7737.6    11.4      7738.9
GR   11.5      7780.1    12.3      7781.3    13.5      7793.7    29.6      7799.0    29.6      7975.2
GR   10.9      7984.6    10.9      8030.1    11.7      8031.3    12.4      8044.5    42.7      8054.5
GR   42.7      8351.0    11.0      8371.2    10.4      8404.1    30.3      8423.5    30.3      8710.9
GR   10.8      8716.2    10.8      8729.1    10.6      8730.7    10.6      8754.3    11.0      8756.0
GR   11.0      8763.9    30.0      8768.7    30.0      8997.6    10.9      9011.4    10.9      9025.0
GR   10.6      9026.5    10.8      9068.8    11.7      9070.0    14.2      9088.9    14.2      9099.7
GR   30.2      9106.1    30.2      9275.3    11.0      9281.7    11.0      9295.5    10.6      9297.5
GR   10.6      9320.8    11.6      9321.7    11.7      9329.7    29.8      9333.2    29.8      9568.4
GR   11.4      9574.5    11.4      9578.8    11.3      9580.2    11.3      9635.9    11.7      9637.3
GR   11.7      9639.3    44.6      9651.4    44.6      9821.1    12.3      9829.6    12.3      9855.8
GR   11.6      9858.1    10.8      9914.5    11.5      9916.6    11.5      9950.5    10.4      9951.7
GR   10.8      9969.1    11.3      9984.3    9.0       10000.0   9.0       10017.5   11.0      10019.5
GR   11.2      10049.7   12.0      10383.1   12.4      10737.4   12.5      10840.8   12.3      11001.2
GR   11.7      11850.6   12.7      12137.7   14.3      12142.0   13.3      12198.2   14.5      12213.8
GR   15.1      12352.0   16.3      12609.1   16.5      12613.2   18.2      12802.7   43.0      12810.0
GR   43.0      12944.7   19.3      12956.6   17.8      13129.4   17.2      13162.7   17.5      13185.7
GR   21.2      13301.3   22.5      13329.5   51.2      13332.9   51.2      13929.7   21.5      13944.4
GR   18.6      14008.5   18.6      14104.4   18.2      14124.7   19.1      14523.0
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ET          5.1                           8472.     11450.
NH   2.     .045      10045.8   .09       13196.6
X1   150.0  59.0      9985.4    10021.2   620.2     721.3     700.5
GR   21.9   8315.7    21.9      8321.9    14.8      8336.8    14.8      8341.2    15.2      8343.5
GR   15.1   8465.8    13.3      8473.7    11.6      8606.7    14.1      8767.7    33.6      8797.2
GR   33.6   9246.1    14.2      9259.3    13.6      9277.5    13.6      9367.1    48.1      9385.0
GR   48.1   9772.9    13.9      9793.0    12.9      9803.4    12.5      9806.6    13.1      9858.0
GR   12.3   9907.0    13.0      9915.5    12.5      9944.2    12.0      9945.1    12.7      9985.4
GR   11.4   9989.7    10.9      10000.0   10.9      10008.0   10.9      10021.2   12.9      10022.3
GR   12.3   10045.8   13.1      10059.0   13.2      10302.9   13.4      10555.1   13.3      10681.4
GR   13.2   10886.0   12.4      11179.4   12.1      11773.2   12.5      11978.6   14.4      11986.6
GR   13.4   12038.5   14.5      12063.3   16.8      12419.7   17.2      12567.8   17.2      12603.1
GR   17.3   12606.7   19.5      12734.9   19.6      12897.7   20.6      13185.6   38.4      13196.6
GR   38.4   13325.2   20.9      13337.3   20.8      13422.8   19.1      13469.0   19.1      13505.2
GR   19.8   13508.3   19.7      13744.2   19.8      14203.9   19.8      14347.2
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 SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
 Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
 TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
 SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*PROF 1



*SECNO 100.000
3280 CROSS SECTION    100.00 EXTENDED      4.60 FEET

        STARTING WSEL FROM ROUTING THROUGH STORAGE-ELEVATION CURVE
        CENTER LINE AT 10000., USUALLY ON FIRST ST
   100.000      5.20      5.60       .00      5.60      5.60       .00       .00       .00      1.70
    2270.0    1096.5     869.2     304.3    5566.6    4339.9    2067.8        .0        .0      1.70
       .00       .20       .20       .15      .090      .090      .090      .000       .40   8048.80
   .000021        0.        0.        0.         0         0         0       .00   3079.40  11128.20


FLOW DISTRIBUTION FOR SECNO=    100.00          CWSEL=      5.60

STA=     8049.    8176.    8298.    8874.    9115.    9233.    9364.  10358.  10586.  10710.  10859.  11128.
  PER Q=      5.8      5.7     22.5      7.8      3.0      3.5     38.3      5.8      2.1      2.1      3.4
   AREA=    623.3    597.3   2535.3    950.4    402.2    458.2   4339.9    774.5    329.9    358.3    605.0
    VEL=       .2       .2       .2       .2       .2       .2       .2       .2       .1       .1       .1
  DEPTH=      4.9      4.9      4.4      4.0      3.4      3.5      4.4      3.4      2.6      2.4      2.2

*SECNO 102.000
3280 CROSS SECTION    102.00 EXTENDED       .41 FEET


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.97

   102.000      6.91      5.61       .00       .00      5.61       .00       .01       .00      -.70
    2270.0    1750.1     422.2      97.7   13905.4    3772.3    1759.7     238.3      53.1      1.30
      1.54       .13       .11       .06      .090      .090      .090      .000     -1.30   7271.40
   .000005      710.      618.      504.         0         0         0       .00   4208.46  11479.86


FLOW DISTRIBUTION FOR SECNO=    102.00          CWSEL=      5.61

STA=     7271.    8064.    8158.    8360.    8700.    8924.    9114.    9609.   10359.   11430.   11480.
  PER Q=     21.9      3.0      8.4     12.7      6.3      6.9     17.9     18.6      3.8       .5
   AREA=   4247.1    549.2   1383.5   2184.5   1216.4   1196.9   3127.9   3772.3   1614.4    145.3
    VEL=       .1       .1       .1       .1       .1       .1       .1       .1       .1       .1
  DEPTH=      5.4      5.8      6.9      6.4      5.4      6.3      6.3      5.0      1.5      2.9
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   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 104.000
3280 CROSS SECTION    104.00 EXTENDED      1.51 FEET


3470 ENCROACHMENT STATIONS=     7370.0   11950.0  TYPE=       1  TARGET=      4580.000
   104.000        5.61       5.61        .00        .00       5.61        .00        .00        .00        .60
    2270.0      1715.2      304.9      249.8    13578.4     2513.3     2943.8      540.7      118.0        .90
      3.14         .13        .12        .08       .090       .090       .090       .000        .00    7370.00
   .000006        743.       580.       485.          0          0          0        .00    4580.00   11950.00


FLOW DISTRIBUTION FOR SECNO=     104.00           CWSEL=       5.61

STA=     7370.     7508.     7769.     8457.     8926.     9095.     9663.     9934.     9964.    10475.    10702.    10916.    11950.
  PER Q=       4.2       7.8      18.4      14.5       4.5      17.2       8.1        .9      13.4       4.6       3.1       3.3
   AREA=     748.7    1387.6    3415.5    2540.1     844.5    3043.3    1439.1     159.4    2513.3     957.5     743.1    1243.2
    VEL=        .1        .1        .1        .1        .1        .1        .1        .1        .1        .1        .1        .1
  DEPTH=       5.4       5.3       5.0       5.4       5.0       5.4       5.3       5.2       4.9       4.2       3.5       1.2

*SECNO 106.000

3265 DIVIDED FLOW

3280 CROSS SECTION    106.00 EXTENDED      1.11 FEET


3470 ENCROACHMENT STATIONS=     7440.0   12250.0  TYPE=       1  TARGET=      4810.000
   106.000        5.41       5.61        .00        .00       5.62        .00        .00        .00        .30
    2270.0      1719.7      320.8      229.5    11112.0     2315.9     2807.3      760.6      177.9       2.30
      4.16         .15        .14        .08       .090       .090       .090       .000        .20    7440.00
   .000011        507.       619.       634.          0          0          0        .00    4678.81   12250.00


FLOW DISTRIBUTION FOR SECNO=     106.00           CWSEL=       5.61

STA=     7440.     7667.     8203.     8767.     8855.     9379.     9934.     9956.    10534.    10856.    11739.    12250.
  PER Q=       7.0      15.7      21.4       3.5      19.4       7.9        .8      14.1       4.4       3.2       2.5
   AREA=    1057.7    2394.5    2930.6     473.1    2692.9    1449.5     113.7    2315.9     906.4    1118.0     782.9
    VEL=        .2        .1        .2        .2        .2        .1        .2        .1        .1        .1        .1
  DEPTH=       4.7       4.5       5.2       5.4       5.1       2.6       5.2       4.0       2.8       1.3       1.5
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


1490 NH CARD USED
*SECNO 108.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=      7450.0   12000.0  TYPE=       1  TARGET=      4550.000
   108.000      4.92      5.62       .00       .00      5.63       .00       .01       .00      2.40
    2270.0    1304.7     500.0     465.3    6684.3    2934.1    3794.5    1024.6     255.7      1.20
      5.39       .20       .17       .12      .075      .089      .090      .000       .70   7450.00
   .000015      760.      811.      792.         0         0         0       .00   4011.73  12000.00


FLOW DISTRIBUTION FOR SECNO=     108.00           CWSEL=       5.62

STA=    7450.     7634.     8179.     8551.     8691.     8792.     9333.     9423.     9655.     9666.    10332.    10556.    10838.
  PER Q=       5.5      19.3      11.4       5.2       4.2       6.4       3.2       2.2        .6      21.4       6.6       6.0
   AREA=     774.6    2507.3    1557.8     507.4     337.9     529.2     272.6     197.5      42.6    2891.5     922.5     953.2
    VEL=        .2        .2        .2        .2        .3        .3        .3        .3        .3        .2        .2        .1
  DEPTH=       4.2       4.6       4.2       3.6       3.3       1.0       3.0        .9       3.9       4.3       4.1       3.4

STA=   10838.    11237.    12000.
  PER Q=       4.5       3.4
   AREA=     924.3     994.4
    VEL=        .1        .1
  DEPTH=       2.3       1.3

1490 NH CARD USED
*SECNO 110.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=      7560.0   11890.0  TYPE=       1  TARGET=      4330.000
   110.000      5.23      5.63       .00       .00      5.63       .00       .01       .00      2.30
    2270.0     892.7     847.0     530.2    3702.3    3156.7    3540.1    1184.4     309.1      1.10
      6.08       .24       .27       .15      .058      .060      .090      .000       .40   7560.00
   .000021      722.      236.      679.         0         0         0       .00   3636.96  11890.00


FLOW DISTRIBUTION FOR SECNO=     110.00           CWSEL=       5.63
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


STA=    7560.    7799.    8212.    8340.    8710.    9207.    9972.   10309.   10441.   10990.   11300.   11890.
  PER Q=      3.1      8.6      6.2     11.5     10.0     23.7     13.6      4.9     13.1      3.8      1.5
   AREA=    542.1   1252.7    425.8    796.7    685.1   1643.6   1513.1    566.0   1803.9    658.2    511.9
    VEL=       .1       .2       .3       .3       .3       .3       .2       .2       .2       .1       .1
  DEPTH=      2.3      3.0      3.3      2.2      1.4      3.3      4.5      4.3      3.3      2.1       .9

1490 NH CARD USED
*SECNO 112.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     7580.0   11850.0  TYPE=       1  TARGET=     4270.000
   112.000     11.14      5.64       .00       .00      5.64       .00       .01       .00      3.00
    2270.0    1195.3     389.3     685.4    4496.6    1826.5    3828.9    1275.8     343.1       .90
      6.53       .27       .21       .18      .056     -.090      .090      .000     -5.50   7580.00
   .000023      486.       49.      505.         0         0         0       .00   3461.12  11824.36


FLOW DISTRIBUTION FOR SECNO=    112.00          CWSEL=       5.64

STA=    7580.    7798.    8177.    8231.    8320.    8588.    8690.    9176.    9236.    9330.    9616.    9910.   10330.
  PER Q=      3.1      9.5      4.2      4.3      4.4      4.8      6.5      4.1      3.4      5.2      3.2     17.1
   AREA=    502.0   1228.3    227.8    285.7    313.2    320.0    483.4    234.6    248.9    407.3    245.3   1826.5
    VEL=       .1       .2       .4       .3       .3       .3       .3       .4       .3       .3       .3       .2
  DEPTH=      2.3      3.2      4.2      3.2      1.2      3.1      1.0      3.9      2.6      1.4       .8      4.3

STA=   10330.   10469.   11092.   11824.
  PER Q=      6.1     20.7      3.4
   AREA=    631.5   2391.3    806.1
    VEL=       .2       .2       .1
  DEPTH=      4.5      3.8      1.1

1490 NH CARD USED
*SECNO 114.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     7520.0   11650.0  TYPE=       1  TARGET=     4130.000
   114.000      5.45      5.65       .00       .00      5.65       .00       .00       .00      4.20
    2270.0    1279.3      50.2     940.5    4474.7     342.7    5507.8    1317.0     356.0       .20
      6.76       .29       .15       .17      .049      .090      .090      .000       .20   7520.00
   .000018      296.      254.       41.         0         0         0       .00   3117.64  11649.93
   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


FLOW DISTRIBUTION FOR SECNO=     114.00           CWSEL=       5.65

STA=     7520.     7693.     8275.     8659.     9139.     9220.     9314.     9900.    10012.    10266.    10948.    11108.    11280.
  PER Q=        5.2       28.8        8.8        4.2        3.9        3.3        2.1        2.2        8.8       23.8        3.8        3.4
   AREA=      689.5     2035.0      654.1      376.7      274.9      268.9      175.6      342.7     1087.0     2932.4      549.0      523.7
    VEL=         .2         .3         .3         .3         .3         .3         .3         .1         .2         .2         .2         .1
  DEPTH=        4.0        3.5        1.7         .8        3.4        2.9         .3        3.1        4.3        4.3        3.4        3.0

STA=    11280.    11650.
  PER Q=        1.6
   AREA=      415.7
    VEL=         .1
  DEPTH=        1.1

1490 NH CARD USED
*SECNO 116.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .63


3470 ENCROACHMENT STATIONS=      8040.0    11470.0  TYPE=       1  TARGET=      3430.000
   116.000       4.46       5.66        .00        .00       5.67        .00        .02        .00       3.90
    2270.0     1157.0     1043.8       69.2     4451.7     4133.6      466.6     1474.1      406.6       3.80
      7.51        .26        .25        .15       .079       .090       .090       .000       1.20    8040.00
   .000045       593.       597.       957.          0          0          0        .00    3114.74   11470.00


FLOW DISTRIBUTION FOR SECNO=     116.00           CWSEL=       5.66

STA=     8040.     8170.     8583.     8690.     9146.     9221.     9405.     9664.     9970.    11170.    11466.    11470.
  PER Q=        4.9       15.4        4.9        5.2        3.6        7.1        7.5        2.4       46.0        3.0         .0
   AREA=      449.6     1399.0      269.7      303.3      233.5      638.0      755.1      403.6     4133.6      459.1        7.5
    VEL=         .2         .2         .4         .4         .3         .3         .2         .1         .3         .1         .1
  DEPTH=        3.5        3.4        2.5         .7        3.1        3.5        2.9        1.3        3.4        1.6        1.8

*SECNO 118.000
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     SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
     Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
     TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 3235 SLOPE TOO STEEP, EXCEEDS          .10


 3265 DIVIDED FLOW

 3685 20 TRIALS ATTEMPTED WSEL,CWSEL
 3693 PROBABLE MINIMUM SPECIFIC ENERGY
 3720 CRITICAL DEPTH ASSUMED

 3470 ENCROACHMENT STATIONS=      8250.0   11250.0  TYPE=       1  TARGET=     3000.000
         HWY 237
    118.000        .81       5.81       5.81        .00       6.06        .24        .12        .00       5.90
     2270.0     2270.0         .0         .0      576.1         .1         .0     1549.6      440.9       6.10
       7.55       3.94        .22        .00       .090       .090       .000       .000       5.00    8323.26
    .123368       698.       657.       755.         20         26          0        .00    1217.07   10013.26


 FLOW DISTRIBUTION FOR SECNO=     118.00           CWSEL=       5.81

 STA=    8323.     8399.     8799.     8909.     8914.     9174.     9365.     9523.    10375.
   PER Q=        2.7       19.0         .8         .2       33.7       34.6        9.0         .0
    AREA=       23.2      145.8       12.7        1.4      173.2      155.3       64.5         .1
     VEL=        2.6        3.0        1.4        2.7        4.4        5.1        3.2         .2
   DEPTH=         .3         .4         .1         .3         .7         .8         .4         .0

*SECNO 120.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO = 43.27


 3470 ENCROACHMENT STATIONS=      8338.4   11360.0  TYPE=       1  TARGET=     3021.600
    120.000       4.36       6.26        .00        .00       6.26        .00        .21        .00       3.30
     2270.0     1435.8      581.2      253.0     4952.3     2305.5     1136.1     1628.7      479.3       3.80
       8.40        .29        .25        .22       .090       .090       .090       .000       1.90    8349.52
    .000066       891.       361.      1001.          7          0          0        .00    3010.48   11360.00


 FLOW DISTRIBUTION FOR SECNO=     120.00           CWSEL=       6.26
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


STA=    8350.    8497.    8626.    8731.    8845.    8969.    9123.    9268.    9668.    9823.    9896.    9936.   10830.
  PER Q=      3.6      5.9      4.5      3.2      3.8      6.8      7.1     15.7      6.3      4.3      2.1     25.6
   AREA=    338.3    437.3    344.7    291.0    332.5    515.0    517.1   1245.3    492.6    291.0    147.3   2305.5
    VEL=       .2       .3       .3       .3       .3       .3       .3       .3       .3       .3       .3       .3
  DEPTH=      2.3      3.4      3.3      2.6      2.7      3.4      3.6      3.1      3.2      4.0      3.7      2.6

STA=   10830.   11209.   11360.
  PER Q=      8.4      2.7
   AREA=    839.6    296.6
    VEL=       .2       .2
  DEPTH=      2.2      2.0

1490 NH CARD USED
*SECNO 122.000

3265-DIVIDED FLOW

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     9000.0   11860.0  TYPE=      1  TARGET=     2860.000
        VISTA MONTANA/HEADQUARTERS DRIVE
   122.000      2.90      6.40      6.40       .00      6.65       .25       .26       .00      6.10
    2270.0     782.8       3.7    1483.4     122.7       2.9     879.8    1761.3     535.0      6.10
      8.49      6.38      1.29      1.69      .045      .045      .090      .000      3.50   9000.00
   .019254     1500.     1182.      600.        20        21         0       .00   1688.13  11254.61


FLOW DISTRIBUTION FOR SECNO=     122.00          CWSEL=       6.40

STA=     9000.    9071.    9494.    9583.   10030.   10309.   10430.   10484.   10740.   10959.   11255.
  PER Q=     34.0       .5       .2     11.8     13.7     12.1      4.6     12.6      8.1      2.4
   AREA=    119.1      3.7      2.9    180.6    181.3    120.4     48.8    166.0    120.1     62.5
    VEL=      6.5      3.1      1.3      1.5      1.7      2.3      2.1      1.7      1.5       .9
  DEPTH=      1.7       .0       .1       .4       .6      1.0       .9       .6       .5       .2

1490 NH CARD USED
*SECNO 124.000
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      SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
      Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
      TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
      SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 3265 DIVIDED FLOW


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.72


 3470 ENCROACHMENT STATIONS=     8930.0   11870.0  TYPE=       1  TARGET=     2940.000
    124.000      3.16      6.76       .00       .00      6.77       .02       .13       .00     30.00
     2270.0     680.8        .1    1589.1     398.1       1.3    2518.8    1763.7     537.3      7.10
       8.51      1.71       .09       .63      .045      .045      .090      .000      3.60   8930.00
    .000864       54.       54.       54.         3         0         0       .00   2023.12  11466.33


 FLOW DISTRIBUTION FOR SECNO=    124.00          CWSEL=      6.76

 STA=    8930.     9033.     9082.     9097.     9496.     9820.    10004.    10190.    10271.    10437.    10625.    10718.    10871.
   PER Q=      21.0       7.2       1.9        .0       4.9       8.6      11.8       4.4       9.5       8.8       3.7       4.7
    AREA=     265.6     102.1      30.4       1.3     196.7     295.0     358.1     142.3     299.5     301.8     134.8     190.7
     VEL=       1.8       1.6       1.4        .1        .6        .7        .8        .7        .7        .7        .6        .6
   DEPTH=       2.6       2.1       1.9        .0        .6       1.6       1.9       1.8       1.8       1.6       1.5       1.2

 STA=   10871.    10985.    11146.    11405.    11466.
   PER Q=       4.3       3.6       5.3        .3
    AREA=     158.8     164.9     249.9      26.2
     VEL=        .6        .5        .5        .3
   DEPTH=       1.4       1.0       1.0        .4

 1490 NH CARD USED
 *SECNO 126.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     8840.0   11820.0  TYPE=       1  TARGET=     2980.000
    126.000      2.70      6.80       .00       .00      6.82       .02       .04       .00      7.10
     2270.0     536.8        .5    1732.8     534.1       2.1    1628.1    1766.1     539.1      6.60
       8.52      1.01       .22      1.06      .073      .045      .057      .000      4.10   8840.00
    .001248       41.       41.       41.         2         0         0       .00   1838.09  11478.09
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


FLOW DISTRIBUTION FOR SECNO=    126.00          CWSEL=      6.80

STA=    8840.    9048.    9114.    9151.    9168.    9613.    9932.   10026.   10146.   10219.   10236.   10257.   10273.
  PER Q=       9.9      4.7      7.3      1.7       .0      7.6      4.5      8.9      9.2      4.1      4.1      3.2
   AREA=     301.6    122.4     83.6     26.5      2.1    189.5     88.9    149.6    125.3     42.7     46.9     36.1
    VEL=        .7       .9      2.0      1.5       .2       .9      1.1      1.4      1.7      2.2      2.0      2.0
  DEPTH=       1.4      1.8      2.3      1.6       .1       .6      1.0      1.2      1.7      2.5      2.2      2.3

STA=   10273.   10302.   10420.   10603.   10697.   11004.   11478.
  PER Q=       3.7     10.6      7.8      3.6      5.0      4.2
   AREA=      50.4    164.8    227.4    117.1    198.1    191.3
    VEL=       1.7      1.5       .8       .7       .6       .5
  DEPTH=       1.7      1.4      1.2      1.2       .6       .4

1490 NH CARD USED
*SECNO 128.000

3265 DIVIDED FLOW

3280 CROSS SECTION    128.00 EXTENDED      1.94 FEET


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.44


3470 ENCROACHMENT STATIONS=     7746.2   11595.0  TYPE=      1  TARGET=     3848.800
   128.000      4.24      7.34       .00       .00      7.35       .02       .54       .00      7.10
    2270.0    1789.4      12.6     468.0    1648.2      29.7     476.9    1797.9     564.4      6.90
      8.69      1.09       .42       .98      .047      .045      .045      .000      3.10   7894.04
   .000606      642.      611.      639.         2         0         0       .00   1609.81  10467.30


FLOW DISTRIBUTION FOR SECNO=    128.00          CWSEL=      7.34

STA=    7894.    8272.    8307.    8328.    8378.    8526.    8770.    8882.    8942.    9011.    9298.    9376.    9806.
  PER Q=       4.4      4.1      7.4      6.1     11.9     26.3     10.6      4.6      3.0       .6       .6      4.9
   AREA=     290.4     71.4     81.7    104.2    239.6    472.8    200.9     94.3     72.6     20.3     29.7    118.8
    VEL=        .3      1.3      2.0      1.3      1.1      1.3      1.2      1.1       .9       .7       .4       .9
  DEPTH=        .8      2.0      4.0      2.1      1.6      1.9      1.8      1.6      1.1       .1       .4       .3

STA=    9806.   10030.   10085.   10147.   10467.
  PER Q=       4.5      3.2      3.8      4.1
   AREA=     111.0     62.0     84.9    100.2
    VEL=        .9      1.2      1.0       .9
  DEPTH=        .5      1.1      1.4       .3
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   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


1490 NH CARD USED
*SECNO 130.000

3265 DIVIDED FLOW

3280 CROSS SECTION    130.00 EXTENDED       .90 FEET


3470 ENCROACHMENT STATIONS=     7815.8   11000.0  TYPE=       1  TARGET=     3184.200
   130.000       4.50       7.90        .00        .00       7.93        .03        .57        .00       7.00
    2270.0     1781.8       26.8      461.3     1339.5       44.2      392.9     1831.9      592.7       8.20
      8.85       1.33        .61       1.17       .052       .045       .045       .000       3.40    7849.16
   .000991       757.       791.       737.          2          0          0        .00    1657.48   11000.00


FLOW DISTRIBUTION FOR SECNO=     130.00          CWSEL=      7.90

STA=    7849.    8434.    8499.    8523.    8576.    8610.    8712.    8985.    9388.    9813.    9925.   10298.   10375.
  PER Q=      6.1      5.9     12.6     11.9      9.0     23.4      4.8      4.5       .3      1.2      5.3      3.0
   AREA=    349.4    146.9    104.5    138.1     97.9    270.8     96.8    122.4     12.7     44.2    124.0     70.2
    VEL=       .4       .9      2.7      2.0      2.1      2.0      1.1       .8       .5       .6      1.0      1.0
  DEPTH=       .6      2.3      4.3      2.6      2.9      2.7       .4       .3       .0       .4       .3       .9

STA=   10375.   10691.   10950.   10972.   11000.
  PER Q=      3.1      4.0      3.9      1.1
   AREA=     62.7     68.0     48.5     19.3
    VEL=      1.1      1.3      1.8      1.3
  DEPTH=       .2       .3      2.2       .7

1490 NH CARD USED
*SECNO 132.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     7646.5   10350.0  TYPE=       1  TARGET=     2703.500
   132.000       3.85       8.75        .00        .00       8.76        .02        .83        .00       7.20
    2270.0     2004.7      162.2      103.1     2019.2      142.3       92.5     1873.9      628.3       7.60
      9.10        .99       1.14       1.11       .059       .045       .045       .000       4.90    7671.97
   .000854       950.       950.       600.          2          0          0        .00    1778.09   10131.27
  SECNO    DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
  Q        QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
  TIME     VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
  SLOPE    XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


FLOW DISTRIBUTION FOR SECNO=    132.00          CWSEL=      8.75

STA=    7672.    8193.    8345.    8408.    8445.    8491.    8523.    8540.    8557.    8816.    8887.    8925.    9176.
  PER Q=     13.8      5.0      4.5     13.5     10.8      4.3      3.2      4.7      3.2      9.7      4.3      3.1
   AREA=    591.1    196.8    129.7    134.2    128.0     64.1     41.8     51.9     63.5    137.2     66.8    173.5
    VEL=       .5       .6       .8      2.3      1.9      1.5      1.7      2.1      1.1      1.6      1.5       .4
  DEPTH=      1.1      1.3      2.1      3.6      2.8      2.0      2.4      3.1       .2      2.0      1.8       .7

STA=    9176.    9404.    9902.    9941.   10052.   10131.   10131.
  PER Q=      3.0      3.3      1.9      7.1      4.5       .0
   AREA=    133.4     65.7     41.5    142.3     92.2       .3
    VEL=       .5      1.1      1.0      1.1      1.1       .4
  DEPTH=       .6       .1      1.1      1.3      1.2       .5

1490 NH CARD USED
*SECNO 134.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .42


3470 ENCROACHMENT STATIONS=     7670.2   10290.0  TYPE=       1  TARGET=      2619.800
   134.000      4.06      9.16       .00       .00      9.19       .03       .43       .00      9.40
    2270.0    2070.5     127.7      71.8    1541.0      86.6      41.3    1885.3     639.0      8.20
      9.15      1.34      1.48      1.74      .089      .045      .045      .000      5.10   7700.38
   .004906      260.      174.      200.         2         0         0       .00   1947.54  10152.73


FLOW DISTRIBUTION FOR SECNO=    134.00          CWSEL=      9.16

STA=    7700.    8078.    8304.    8418.    8444.    8486.    8510.    8525.    8556.    8595.    8903.    9014.    9248.
  PER Q=     10.9      3.4      4.8      3.4      6.6     11.9      5.2      6.8      5.5     16.1      4.0      9.4
   AREA=    268.9    109.0     76.1     45.5     82.1     94.9     46.9     74.7     70.9    312.9     89.9    202.5
    VEL=       .9       .7      1.4      1.7      1.8      2.9      2.5      2.1      1.7      1.2      1.0      1.0
  DEPTH=       .7       .5       .7      1.8      2.0      3.9      3.2      2.4      1.8      1.0       .8       .9

STA=    9248.    9903.    9907.   10087.   10148.   10153.
  PER Q=      3.3       .1      5.6      3.1       .0
   AREA=     65.3      1.5     86.6     40.4       .9
    VEL=      1.2      1.3      1.5      1.8       .7
  DEPTH=       .1       .4       .5       .7       .2
  SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
  Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
  TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
  SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


1490 NH CARD USED
*SECNO 136.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.94


3470 ENCROACHMENT STATIONS=     7496.7   10250.0  TYPE=      1  TARGET=     2753.300
   136.000      3.95     10.05       .00       .00     10.07       .02       .88       .00      9.00
    2270.0    2103.8      67.1      99.1    1796.7      78.1     163.8    1901.8     655.6     10.90
      9.24      1.17       .86       .61      .061      .045      .090      .000      6.10   7523.23
   .001304      380.      481.      470.         2         0         0       .00   1711.77  10250.00


FLOW DISTRIBUTION FOR SECNO=    136.00         CWSEL=     10.05

STA=    7523.    8204.    8448.    8482.    8515.    8573.    8611.    8684.    8727.    9287.    9366.    9866.    9907.
  PER Q=     20.8      9.4      3.5     17.4     15.1      8.8      3.4      3.7      3.5      3.4      3.0       .7
   AREA=    744.5    254.0     77.2    133.0    152.3     91.8     62.0     57.5     73.2     69.1     64.4     17.8
    VEL=       .6       .8      1.0      3.0      2.3      2.2      1.2      1.5      1.1      1.1      1.1       .9
  DEPTH=      1.1      1.0      2.3      3.9      2.6      2.4       .8      1.3       .1       .9       .1       .4

STA=    9907.   10049.   10250.
  PER Q=      3.0      4.4
   AREA=     78.1    163.8
    VEL=       .9       .6
  DEPTH=       .6       .8

1490 NH CARD USED
*SECNO 144.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     7508.1   10900.0  TYPE=      1  TARGET=     3391.900
   144.000      2.90     10.80       .00       .00     10.81       .01       .73       .00     10.10
    2270.0    1868.3      27.0     374.7    2419.3      51.4     557.4    1945.6     690.4     10.10
      9.52       .77       .53       .67      .071      .045      .066      .000      7.90   7536.21
   .000755      760.      780.      700.         4         0         0       .00   2322.90  10731.49
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      SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
      Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
      TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
      SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 FLOW DISTRIBUTION FOR SECNO=     144.00          CWSEL=      10.80

 STA=    7536.     8147.     8426.     8492.     8518.     8575.     8855.     8935.     9144.     9355.     9889.     9927.    10066.
   PER Q=      21.1      14.9       9.5       3.7       6.4       5.4       3.5       6.0       8.3       3.4        .1       1.2
    AREA=     840.4     503.9     154.6      55.6     105.7     106.9     127.9     238.0     184.8      97.2       4.2      51.4
     VEL=        .6        .7       1.4       1.5       1.4       1.2        .6        .6       1.0        .8        .5        .5
   DEPTH=       1.4       1.8       2.4       2.1       1.9        .4       1.6       1.1        .9        .2        .1        .4

 STA=   10066.    10201.    10360.    10508.    10731.    10731.
   PER Q=       4.0       4.9       3.6       4.1        .0
    AREA=     105.9     135.5     149.5     166.0        .5
     VEL=        .9        .8        .5        .6        .2
   DEPTH=        .8        .9       1.0        .7        .6

 1490 NH CARD USED
 *SECNO 146.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=      7772.5    11400.0  TYPE=       1  TARGET=      3627.500
    146.000       2.73      11.23        .00        .00      11.25        .02        .45        .00      10.30
     2270.0     2123.3       52.3       94.3     1678.2      118.4      358.1     1976.2      720.5      10.80
       9.64       1.27        .44        .26       .052       .067       .090       .000       8.50    7803.80
    .001028       499.       501.       590.          2          0          0        .00    2612.18   11400.00


 FLOW DISTRIBUTION FOR SECNO=     146.00          CWSEL=      11.23

 STA=    7804.     8072.     8312.     8524.     8569.     8606.     8967.     9049.     9102.     9393.     9438.     9502.     9525.
   PER Q=       8.6       5.0       7.3       7.7       7.0      10.7      11.8       4.9       3.3       6.5      11.9       3.6
    AREA=     318.3     217.8     131.9      98.4      85.9     144.9     161.1      79.7      62.7      88.8     147.3      47.2
     VEL=        .6        .5       1.3       1.8       1.9       1.7       1.7       1.4       1.2       1.7       1.8       1.7
   DEPTH=       1.2        .9        .6       2.2       2.3        .4       2.0       1.5        .2       2.0       2.3       2.1

 STA=    9525.     9580.     9941.    10021.    10184.    11204.    11400.
   PER Q=       4.9        .3       1.2       1.1       3.2       1.0
    AREA=      81.4      12.6      40.4      78.0     286.6      71.5
     VEL=       1.4        .6        .7        .3        .3        .3
   DEPTH=       1.5        .0        .5        .5        .3        .4
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     SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
     Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
     TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 1490 NH CARD USED
 *SECNO 148.000

 3265 DIVIDED FLOW


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .47


 3470 ENCROACHMENT STATIONS=      7697.3   11700.0  TYPE=       1  TARGET=      4002.700
    148.000       3.27      12.27        .00        .00      12.38        .12       1.13        .00      10.80
     2270.0     1492.2      430.5      347.3      565.1      113.3      435.5     1997.8      746.8      11.00
       9.70       2.64       3.80        .80       .045       .045       .079       .000       9.00    7731.70
    .004616       619.       553.       454.          3          0          0        .00    1777.81   11700.00


 FLOW DISTRIBUTION FOR SECNO=     148.00          CWSEL=      12.27

 STA=     7732.     8030.     8404.     8754.     9025.     9069.     9321.     9636.     9915.     9969.    10020.    10050.    10383.
   PER Q=      10.5       7.1       8.3       3.8       9.1       7.9       6.1       6.4       6.5      19.0       3.8       8.3
    AREA=      97.6      56.1      62.6      31.9      68.4      61.8      64.8      63.0      58.8     113.3      35.2     221.3
     VEL=       2.4       2.9       3.0       2.7       3.0       2.9       2.1       2.3       2.5       3.8       2.5        .9
   DEPTH=        .3        .2        .2        .1       1.6        .2        .2        .2       1.1       2.2       1.2        .7

 STA=    10383.    11700.
   PER Q=       3.1
    AREA=     179.0
     VEL=        .4
   DEPTH=        .1

 1490 NH CARD USED
 *SECNO 150.000

 3265 DIVIDED FLOW


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.76


 3470 ENCROACHMENT STATIONS=      8472.0   11450.0  TYPE=       1  TARGET=      2978.000
    150.000       3.06      13.96        .00        .00      14.00        .03       1.61        .00      12.70
     2270.0      999.2      262.7     1008.1      664.3      102.4     1431.8     2023.7      777.2      10.90
       9.85       1.50       2.57        .70       .045       .045       .088       .000      10.90    8472.00
    .001499       620.       701.       721.          3          0          0        .00    2045.34   11450.00
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  SECNO     DEPTH      CWSEL     CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
  Q         QLOB       QCH       QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
  TIME      VLOB       VCH       VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
  SLOPE     XLOBL      XLCH      XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


FLOW DISTRIBUTION FOR SECNO=    150.00          CWSEL=     13.96

STA=    8472.     8607.     8759.     9858.     9907.     9944.     9985.    10021.    10303.    10555.    10886.    11179.    11450.
  PER Q=     15.1      11.4       5.3       4.1       3.0       5.2      11.6       7.8       3.6       4.9      10.7      17.3
   AREA=    202.9     180.8     105.3      62.2      46.2      66.8     102.4     251.1     168.9     225.5     343.2     443.2
    VEL=      1.7       1.4       1.1       1.5       1.5       1.8       2.6        .7        .5        .5        .7        .9
  DEPTH=      1.5       1.2        .1       1.3       1.2       1.6       2.9        .9        .7        .7       1.2       1.6
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                                                                                THIS RUN EXECUTED 26JUN95    14:58:17
**************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
**************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


50% BLOCKAGE CONDITIONS,

SUMMARY PRINTOUT


     SECNO      XLCH        Q     STENCL      SSTA     STCHL     STCHR     ENDST    STENCR    TOPWID     10*KS        EG

    100.000       .00   2270.00       .00   8048.80   9363.90  10357.70  11128.20       .00   3079.40       .21      5.60

*   102.000    618.30   2270.00       .00   7271.40   9609.00  10358.70  11479.86       .00   4208.46       .05      5.61

    104.000    579.60   2270.00   7370.00   7370.00   9964.20  10474.50  11950.00  11950.00   4580.00       .06      5.61

    106.000    619.20   2270.00   7440.00   7440.00   9956.00  10533.90  12250.00  12250.00   4678.81       .11      5.62

    108.000    811.10   2270.00   7450.00   7450.00   9654.60  10331.90  12000.00  12000.00   4011.73       .15      5.63

    110.000    236.10   2270.00   7560.00   7560.00   9206.50  10308.50  11890.00  11890.00   3636.96       .21      5.63

    112.000     49.10   2270.00   7580.00   7580.00   9910.00  10329.90  11824.36  11850.00   3461.12       .23      5.64

    114.000    253.60   2270.00   7520.00   7520.00   9899.50  10011.50  11649.93  11650.00   3117.64       .18      5.65

*   116.000    597.10   2270.00   8040.00   8040.00   9969.80  11170.40  11470.00  11470.00   3114.74       .45      5.67

*   118.000    656.60   2270.00   8250.00   8323.26   9752.80  10375.30  10013.26  11250.00   1217.07   1233.68      6.06

*   120.000    361.10   2270.00   8338.40   8349.52   9935.90  10829.80  11360.00  11360.00   3010.48       .66      6.26

*   122.000   1181.50   2270.00   9000.00   9000.00   9494.39   9583.33  11254.61  11860.00   1688.13    192.54      6.65

*   124.000     54.30   2270.00   8930.00   8930.00   9344.88   9622.03  11466.33  11870.00   2023.12      8.64      6.77

    126.000     41.30   2270.00   8840.00   8840.00   9501.74   9613.23  11478.09  11820.00   1838.09     12.48      6.82

*   128.000    611.20   2270.00   7746.20   7894.04   9297.78   9376.47  10467.30  11595.00   1609.81      6.06      7.35

    130.000    790.80   2270.00   7815.80   7849.16   9813.06   9924.64  11000.00  11000.00   1657.48      9.91      7.93

    132.000    949.60   2270.00   7646.50   7671.97   9941.10  10051.90  10131.27  10350.00   1778.09      8.54      8.76
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        SECNO     XLCH        Q     STENCL     SSTA     STCHL     STCHR     ENDST    STENCR    TOPWID     10*KS       EG

*      134.000   173.80   2270.00   7670.20   7700.38   9907.80  10087.10  10152.73  10290.00   1947.54     49.06      9.19

*      136.000   481.10   2270.00   7496.70   7523.23   9906.80  10048.60  10250.00  10250.00   1711.77     13.04     10.07

       144.000   780.00   2270.00   7508.10   7536.21   9927.20  10065.60  10731.49  10900.00   2322.90      7.55     10.81

       146.000   501.00   2270.00   7772.50   7803.80   9940.80  10184.10  11400.00  11400.00   2612.18     10.28     11.25

*      148.000   552.50   2270.00   7697.30   7731.70   9969.10  10019.50  11700.00  11700.00   1777.81     46.16     12.38

*      150.000   700.50   2270.00   8472.00   8472.00   9985.40  10021.20  11450.00  11450.00   2045.34     14.99     14.00
```

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50% BLOCKAGE CONDITIONS,

SUMMARY PRINTOUT


     SECNO     XLCH       Q        VCH     AREA       VOL      CRIWS    DEPTH     DIFEG      EG     DIFWSP    DIFWSX

    100.000      .00   2270.00     .20  11974.26       .00      .00     5.20       .00     5.60      .00       .00

 *  102.000   618.30   2270.00     .11  19437.41    238.27      .00     6.91       .00     5.61      .00       .01

    104.000   579.60   2270.00     .12  19035.46    540.65      .00     5.61       .00     5.61      .00       .00

    106.000   619.20   2270.00     .14  16235.22    760.60      .00     5.41       .00     5.62      .00       .00

    108.000   811.10   2270.00     .17  13412.87   1024.64      .00     4.92       .00     5.63      .00       .01

    110.000   236.10   2270.00     .27  10399.09   1184.45      .00     5.23       .00     5.63      .00       .01

    112.000    49.10   2270.00     .21  10152.03   1275.77      .00    11.14       .00     5.64      .00       .01

    114.000   253.60   2270.00     .15  10325.14   1316.99      .00     5.45       .00     5.65      .00       .00

 *  116.000   597.10   2270.00     .25   9051.93   1474.06      .00     4.46       .00     5.67      .00       .02

 *  118.000   656.60   2270.00     .22    576.20   1549.57     5.81      .81       .00     6.06      .00       .15

 *  120.000   361.10   2270.00     .25   8393.99   1628.71      .00     4.36       .00     6.26      .00       .45

 *  122.000  1181.50   2270.00    1.29   1005.37   1761.28     6.40     2.90       .00     6.65      .00       .14

 *  124.000    54.30   2270.00     .09   2918.17   1763.72      .00     3.16       .00     6.77      .00       .36

    126.000    41.30   2270.00     .22   2164.33   1766.11      .00     2.70       .00     6.82      .00       .04

 *  128.000   611.20   2270.00     .42   2154.86   1797.86      .00     4.24       .00     7.35      .00       .54

    130.000   790.80   2270.00     .61   1776.58   1831.86      .00     4.50       .00     7.93      .00       .57

    132.000   949.60   2270.00    1.14   2254.04   1873.86      .00     3.85       .00     8.76      .00       .84

 *  134.000   173.80   2270.00    1.48   1668.92   1885.25      .00     4.06       .00     9.19      .00       .42

 *  136.000   481.10   2270.00     .86   2038.62   1901.83      .00     3.95       .00    10.07      .00       .89

    144.000   780.00   2270.00     .53   3028.04   1945.56      .00     2.90       .00    10.81      .00       .75

    146.000   501.00   2270.00     .44   2154.61   1976.22      .00     2.73       .00    11.25      .00       .43

 *  148.000   552.50   2270.00    3.80   1113.88   1997.77      .00     3.27       .00    12.38      .00      1.04

 *  150.000   700.50   2270.00    2.57   2198.46   2023.72      .00     3.06       .00    14.00      .00      1.70
 SUMMARY OF ERRORS AND SPECIAL NOTES


WARNING SECNO=     102.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     116.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     118.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     118.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     118.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
CAUTION SECNO=     118.000  PROFILE=  1  SLOPE TOO STEEP

WARNING SECNO=     120.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     122.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     122.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     122.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=     124.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     128.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     134.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     136.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     148.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     150.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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DECK2

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*********************************************                                              ********************************
*  HEC-2 WATER SURFACE PROFILES             *                                              *  U.S. ARMY CORPS OF ENGINEERS
*                                           *                                              *  HYDROLOGIC ENGINEERING CENTE
*  Version   4.6.2;  May 1991               *                                              *  609 SECOND STREET, SUITE D
*                                           *                                              *  DAVIS, CALIFORNIA 95616-4687
*  RUN DATE    26JUN95    TIME    14:58:28  *                                              *          (916) 756-1104
*********************************************                                              ********************************
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X     X XXXXXXX  XXXXX            XXXXX
X     X X       X     X          X     X
X     X X       X                      X
XXXXXXX XXXX    X         XXXXX   XXXXX
X     X X       X                X
X     X X       X     X          X
X     X XXXXXXX  XXXXX           XXXXXXX
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                                                                                     THIS RUN EXECUTED 26JUN95    14:58:28
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************


T1      SCHAAF & WHEELER
T2      REVISED NORTH SAN JOSE FLOODPLAIN W/O COYOTE SPILL
T3      50% BLOCKED CONDITIONS 100-YEAR - DECK 2

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS      Q         WSEL      FQ

          3.                                                                     13.96

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH      FN        ALLDC      IBW       CHNIM      ITRACE

 -1.     0.         -1.                                                                       15.


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

 38.      39.        43.        27.        53.        21.        22.        54.        28.        4.
 5.       3.         1.         38.        39.        43.        26.        25.        7.         42.
 8.       61.        3.         50.         51.

NC   .045     .045       .045
QT   3.       2270.      2270.
ET            5.1        5.1                    8472.       11450.
NH   2.       .045       10045.8    .09         13196.6
        STARTING WSEL FROM DECK 1
X1   150.     59.        9985.4     10021.2     620.2       721.3       700.5
GR   21.9     8315.7     21.9       8321.9      14.8        8336.8      14.8        8341.2       15.2        8343.5
GR   15.1     8465.8     13.3       8473.7      11.6        8606.7      14.1        8767.7       33.6        8797.2
GR   33.6     9246.1     14.2       9259.3      13.6        9277.5      13.6        9367.1       48.1        9385.
GR   48.1     9772.9     13.9       9793.       12.9        9803.4      12.5        9806.6       13.1        9858.
GR   12.3     9907.0     13.0       9915.5      12.5        9944.2      12.0        9945.1       12.7        9985.4
GR   11.4     9989.7     10.9       10000.      10.9        10008.      10.9        10021.2      12.9        10022.3
GR   12.3     10045.8    13.1       10059.      13.2        10302.9     13.4        10555.1      13.3        10681.4
GR   13.2     10886.     12.4       11179.4     12.1        11773.2     12.5        11978.6      14.4        11986.6
GR   13.4     12038.5    14.5       12063.3     16.8        12419.7     17.2        12567.8      17.2        12603.1
GR   17.3     12606.7    19.5       12734.9     19.6        12897.7     20.6        13185.6      38.4        13196.6
GR   38.4     13325.2    20.9       13337.3     20.8        13422.8     19.1        13469.       19.1        13505.2
GR   19.8     13508.3    19.7       13744.2     19.8        14203.9     19.8        14347.2
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ET            5.1       5.1                 8924.9    11250.
NH   3.       .045      10022.3   .09       11852.1   .045      15113.9
X1   152.0    80.0      9981.4    10022.3   482.7     540.      455.0
GR   22.3     8919.5    22.3      8924.9    14.0      8947.8    13.5      8964.7    13.1      8966.9
GR   13.1     9049.4    13.1      9062.5    13.8      9065.7    14.4      9127.7    13.5      9138.5
GR   15.6     9234.0    23.7      9238.1    13.6      9367.7    14.4      9415.2    47.4      9448.6
GR   47.4     9773.0    13.0      9798.0    12.5      9800.4    13.6      9902.5    14.0      9908.1
GR   12.3     9942.3    13.0      9981.4    11.6      9983.6    11.6      10000.0   11.6      10017.9
GR   12.6     10022.3   14.1      10638.9   14.1      10729.2   13.7      11213.0   23.2      11220.0
GR   23.2     11368.2   13.3      11370.9   13.3      11438.4   14.0      11440.7   13.5      11622.3
GR   14.3     11631.8   14.9      11692.4   42.8      11703.5   42.8      11804.3   14.9      11814.6
GR   14.6     11852.1   15.5      11855.9   14.8      11935.1   15.5      11948.4   16.8      12144.1
GR   16.9     12250.6   17.9      12340.4   19.2      12461.3   37.8      12467.6   37.8      12753.2
GR   19.8     12774.4   18.3      12852.4   18.7      12886.4   19.4      12911.5   21.8      12928.8
GR   58.9     12934.0   58.9      13142.0   23.0      13151.8   23.1      13300.0   49.9      13306.9
GR   49.9     13442.7   21.2      13458.5   20.5      13517.1   21.0      13520.5   20.3      13605.6
GR   22.8     13662.8   24.0      13665.5   24.2      13688.2   35.9      13696.2   35.9      14475.9
GR   24.3     14486.7   24.2      14520.7   25.1      14585.6   26.2      14613.8   46.5      14620.4
GR   46.5     14884.5   26.5      14892.1   25.4      14949.3   26.0      14963.7   27.6      15113.9

ET            5.1       5.1                 9209.2    11170.
NH   5.       .045      10045.7   .09       10573.5   .045      11091.3   .09       11811.8   .045
NH   15227.
        RIVER OAKS PKWY
X1   154.0    27.0      9945.5    10573.5   405.0     270.      379.7
GR   21.9     9204.0    21.9      9209.2    13.1      9239.3    12.1      9262.6    12.8      9890.5
GR   12.8     9945.5    13.4      9962.2    13.6      10000.0   13.4      10045.7   15.1      10573.5
GR   15.0     11091.3   15.0      11632.0   14.9      11811.8   14.8      11870.3   16.3      12109.3
GR   17.3     12344.7   18.3      12577.0   19.1      12800.8   20.5      13186.5   20.5      13489.2
GR   21.0     13703.8   23.0      14124.9   24.1      14342.9   25.0      14545.8   25.5      14763.6
GR   26.7     14976.6   26.8      15227.2

ET            5.1       5.1                 9232.1    11150.
NH   4.       .045      10087.1   .09       10523.3   .045      11111.7   .09       15178.8
X1   156.0    56.0      9945.9    10126.6   61.1      55.       55.3
GR   22.3     9224.9    21.8      9232.1    12.7      9261.6    13.4      9320.5    14.1      9332.4
GR   10.8     9389.3    10.8      9448.6    12.5      9485.2    12.4      9523.3    10.3      9542.2
GR   10.5     9624.3    11.1      9636.2    11.1      9666.5    10.6      9676.5    11.1      9865.9
GR   13.3     9883.3    13.5      9935.3    13.2      9945.9    13.1      9970.0    13.7      10000.0
GR   12.5     10087.1   13.2      10126.6   15.2      10523.3   15.05     10750.    30.       10751.
GR   30.      10900.    30.       11000.    14.88     11001.    14.8      11111.7   14.7      11600.
GR   14.5     11723.2   14.8      11771.6   14.9      11804.7   14.3      11897.0   15.8      12000.2
GR   16.9     12143.5   17.8      12290.6   18.6      12439.4   18.1      12528.1   18.7      12655.7
GR   20.0     12768.3   20.4      12933.5   20.4      13081.9   21.9      13369.6   20.7      13456.6
GR   20.8     13619.5   22.8      14088.3   23.0      14190.5   23.6      14211.7   26.0      14364.6
GR   25.1     14510.0   25.5      14677.9   26.8      14780.3   27.3      14931.7   27.0      15071.2
GR   27.4     15178.8
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ET          5.1       5.1                 9190.1    11025.
NH   4.     .045      10078.5   .09       10706.8   .045      11250.1   .09       15620.8
X1   158.0  68.0      9982.7    10020.7   444.8     403.3     438.9
GR   22.3   9190.1    13.8      9212.9    12.6      9240.6    12.8      9281.1    37.9      9293.9
GR   37.9   9566.4    16.3      9599.2    13.3      9613.2    13.3      9630.5    16.6      9642.2
GR   25.8   9644.4    25.8      9745.2    13.6      9752.2    12.7      9831.5    12.4      9854.9
GR   13.0   9888.2    12.7      9904.5    14.0      9916.4    13.1      9941.3    12.7      9982.7
GR   10.9   9986.8    11.0      10000.0   11.2      10017.6   13.0      10020.7   13.2      10065.7
GR   13.8   10078.5   13.7      10094.9   15.3      10690.2   13.5      10706.8   13.1      10727.9
GR   15.3   10777.6   54.9      10803.4   54.9      11057.4   15.6      11068.8   14.5      11131.2
GR   13.5   11208.0   13.7      11250.1   14.7      11251.4   14.9      11481.4   16.1      11633.9
GR   14.9   11656.0   15.6      11705.6   15.0      11737.8   15.1      11740.9   16.7      11781.0
GR   16.7   11871.9   18.2      12388.1   20.9      12819.6   20.9      12957.5   21.6      13087.7
GR   22.5   13291.7   24.1      13628.9   24.1      13782.6   22.7      13809.9   22.8      13867.3
GR   23.1   13876.2   24.0      13897.8   26.3      13937.6   25.8      14083.1   26.3      14413.9
GR   26.5   14644.2   26.7      14866.3   27.8      15318.7   28.7      15586.1   29.3      15599.2
GR   29.3   15604.5   29.1      15611.7   29.1      15620.8

ET          5.1       5.1                 9050.     10765.
NH   3.     .09       11419.9   .045      13344.2   .09       15105.5
X1   160.0  37.0      9986.3    10015.9   475.0     750.      469.1
GR   22.3   8866.5    22.3      8870.9    16.6      8887.0    16.6      8936.4    16.3      8941.3
GR   15.0   9306.6    13.6      9673.5    13.1      9846.2    13.3      9946.2    13.4      9986.3
GR   11.7   9989.1    11.7      10000.0   11.7      10013.3   13.0      10015.9   13.0      10101.8
GR   13.7   10263.7   13.9      10487.2   14.0      10726.1   14.2      10941.7   14.2      11174.9
GR   14.9   11419.9   16.1      11469.8   15.3      11518.0   17.8      11894.8   17.1      12057.5
GR   18.8   12472.9   19.5      12672.8   19.3      12772.2   21.7      13199.7   21.8      13344.2
GR   22.7   13372.1   22.4      13451.8   22.3      13776.7   22.9      14127.9   23.9      14329.0
GR   25.8   14547.8   27.9      15105.5

ET          5.1       5.1                 9120.     10600.
NH   3.     .09       11299.6   .045      12853.3   .09       14505.4
X1   162.0  60.0      9982.8    10017.9   455.8     400.      470.6
GR   22.4   8671.0    22.3      8678.8    14.2      8699.9    14.2      9163.9    13.8      9197.3
GR   13.8   9274.8    15.2      9305.6    14.1      9591.6    15.0      9739.3    13.1      9762.3
GR   14.0   9926.0    13.2      9937.5    13.6      9982.8    12.1      9987.3    12.1      10000.0
GR   12.1   10011.5   13.3      10017.9   13.4      10054.7   13.9      10060.5   14.6      10085.5
GR   13.9   10106.3   15.2      10776.2   15.1      11249.0   15.3      11263.4   17.2      11273.1
GR   16.0   11299.6   17.0      11334.5   16.9      11352.8   16.1      11383.1   16.2      11385.4
GR   16.9   11397.7   16.2      11423.4   17.3      11498.2   16.3      11588.2   17.2      11680.1
GR   16.7   11755.6   18.5      11861.1   72.7      11886.4   71.5      12174.2   20.2      12192.3
GR   20.6   12207.3   20.6      12248.3   70.4      12264.5   70.4      12552.8   18.8      12569.5
GR   17.7   12623.9   21.0      12853.3   21.7      12902.1   23.2      12914.2   22.7      12995.4
GR   22.9   12998.4   23.2      13010.5   22.7      13022.1   22.2      13028.1   23.0      13298.9
GR   23.9   13528.9   24.0      13670.4   24.9      13710.0   26.1      13929.6   28.1      14505.4

ET          5.1       5.1                 9180.     10450.0
NH   3.     .09       11257.3   .045      12661.7   .09       17635.1
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      MONTAGUE EXPWY
X1   164.0    68.0      9911.0    10099.4   410.6     320.      416.0
GR   24.5     8608.3    20.0      8622.7    20.3      8628.1    23.7      8637.5    22.8      8654.3
GR   16.3     8690.4    14.4      8804.6    15.2      9068.1    14.8      9230.6    15.6      9254.1
GR   15.6     9361.9    15.9      9871.9    15.1      9908.3    15.0      9911.0    16.0      9966.7
GR   16.5     10000.0   15.7      10055.7   16.1      10099.4   14.2      10120.9   15.2      10493.7
GR   16.0     10920.5   15.7      11079.2   17.4      11257.3   17.9      11316.6   17.1      11353.4
GR   18.6     11378.5   19.5      11443.6   17.3      11475.2   17.3      11704.7   18.1      11989.7
GR   19.5     12188.0   20.4      12419.1   21.4      12547.0   22.7      12571.5   21.3      12661.7
GR   22.1     12780.5   23.0      12873.8   23.1      12957.6   23.8      13089.4   23.8      13167.3
GR   24.1     13326.5   24.3      13482.6   23.9      14073.8   23.2      14082.9   23.6      14097.9
GR   24.6     14164.4   24.2      14224.9   24.7      14228.0   28.9      14248.4   29.3      14257.5
GR   28.7     14506.3   28.6      14654.2   29.0      14974.5   29.8      15072.6   26.8      15089.5
GR   26.3     15382.8   26.9      15396.3   26.4      15649.2   26.5      15904.2   26.7      16116.0
GR   26.9     16247.3   28.1      16484.1   29.0      16705.4   30.4      16893.3   32.9      17143.4
GR   34.3     17377.1   34.9      17547.7   34.9      17635.1

ET            5.1       5.1                 9200.     10400.
NH   7.       .045      10044.3   .09       10694.    .045      12086.6   .09       12336.9   .045
NH   12811.   .09       13211.1   .045      17480.4
X1   166.0    43.0      9917.6    10371.6   94.       94.       94.0
GR   26.3     8604.2    19.8      8971.4    16.8      9279.7    16.3      9612.3    16.9      9917.6
GR   16.8     9941.2    16.9      10000.0   16.8      10044.3   17.2      10371.6   18.0      10413.6
GR   18.4     10419.7   18.5      10694.0   18.6      10954.5   18.7      11050.5   18.9      11247.2
GR   19.4     11402.3   19.9      11672.4   20.7      12086.6   20.9      12336.9   21.3      12581.9
GR   22.1     12811.4   22.4      13075.8   23.8      13211.1   23.4      13412.6   24.3      13629.2
GR   24.5     13751.5   25.0      14077.4   25.8      14262.4   25.8      14482.5   26.3      14698.8
GR   26.4     14973.4   26.8      15255.1   26.9      15271.1   26.8      15445.9   27.1      15712.2
GR   27.5     15892.2   28.1      16169.1   29.7      16444.5   31.6      16669.8   33.9      16934.9
GR   35.2     17158.4   36.6      17408.3   37.1      17480.4

ET            5.1       5.1                 9160.     10470.
NH   5.       .045      11973.5   .09       12381.1   .045      12807.    .09       13271.2   .045
NH   17462.
X1   168.0    74.0      9925.2    10129.5   94.       94.       94.3
GR   25.0     8615.9    24.8      8623.9    17.0      8662.4    17.3      8812.5    17.6      8914.4
GR   17.8     8992.4    15.5      9158.4    15.6      9238.6    16.4      9266.6    15.9      9475.1
GR   14.1     9487.5    13.8      9630.7    15.5      9925.2    15.7      9955.2    16.7      10000.0
GR   15.5     10095.3   16.0      10129.5   17.5      10500.6   17.5      10873.2   17.7      11043.5
GR   18.0     11223.7   18.2      11322.1   17.2      11381.6   18.1      11387.4   19.2      11421.2
GR   19.2     11495.6   19.8      11867.0   19.9      11973.5   20.3      12176.2   20.8      12381.1
GR   20.9     12560.4   21.4      12807.2   22.0      13024.6   23.2      13069.0   23.2      13271.2
GR   23.2     13512.4   23.8      13796.4   24.9      13908.5   23.9      13934.7   24.6      13979.5
GR   23.4     14065.7   23.7      14068.1   23.8      14075.7   26.5      14122.9   26.5      14357.2
GR   26.8     14533.6   25.6      14715.9   27.2      14857.8   26.3      14984.7   26.6      14997.9
GR   28.0     15012.4   27.7      15174.5   28.5      15187.7   27.2      15334.4   28.1      15574.6
GR   28.4     15797.7   29.2      16007.8   29.1      16255.7   29.1      16284.6   29.5      16308.0
GR   29.5     16334.2   29.5      16399.2   29.9      16403.6   30.8      16487.2   32.6      16651.0
GR   33.4     16786.5   33.4      16887.9   33.5      16997.3   33.1      17089.7   34.5      17195.1
GR   36.2     17260.5   37.4      17422.2   35.4      17438.3   35.7      17461.9
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ET            5.1       5.1                  9100.     10770.
NC   .045     .045      .045
X1   170.0    90.       9983.9    10020.2    634.7     280.       534.9
GR   25.1     8589.5    25.0      8593.4     16.9      8613.7     16.6      8624.5     15.4      8713.4
GR   16.0     8806.4    47.9      8823.8     47.9      9025.0     16.5      9040.5     16.2      9075.4
GR   15.0     9080.7    14.9      9132.6     17.2      9140.1     16.9      9152.0     15.4      9169.7
GR   15.8     9211.1    16.3      9213.3     16.8      9226.4     18.7      9232.5     17.3      9242.1
GR   14.6     9250.1    15.9      9287.6     17.0      9292.4     17.9      9303.5     36.6      9312.1
GR   36.7     9466.5    17.0      9469.9     14.3      9525.0     15.2      9614.2     18.2      9655.8
GR   36.1     9664.8    36.1      9829.4     17.6      9831.9     15.6      9849.0     14.6      9904.4
GR   15.5     9906.3    16.4      9936.1     15.4      9945.4     15.6      9983.9     13.8      9987.2
GR   13.8     10000.0   13.8      10018.4    14.7      10020.2    15.0      10059.7    16.3      10062.2
GR   15.1     10080.9   14.2      10090.4    14.8      10097.9    14.8      10121.4    16.6      10268.3
GR   20.0     10305.6   19.2      10650.1    17.2      10658.7    17.0      10789.9    51.5      10805.1
GR   51.6     10957.0   17.4      10974.1    17.5      11086.9    52.2      11108.1    52.2      11243.3
GR   20.6     11256.9   20.6      11285.7    18.5      11296.9    18.5      11307.5    16.5      11318.0
GR   17.3     11355.1   17.0      11401.0    17.8      11404.6    19.2      11416.9    19.2      11431.7
GR   17.5     11440.8   18.0      11504.1    17.1      11507.4    18.5      11558.5    19.1      11559.4
GR   19.1     11582.6   52.0      11604.0    52.0      11876.6    19.5      11879.9    19.1      11931.0
GR   19.4     11947.0   18.9      12118.0    17.7      12131.5    17.8      12266.3    18.5      12281.3
GR   18.0     12338.1   19.2      12413.6    19.5      12415.8    19.7      12423.3    55.8      12441.9

ET            5.1       5.1                  8750.     11320.
NH   3.       .045      8833.9    .09        9301.3    .045       11866.6
X1   172.0    90.       9986.2    10015.8    665.7     3266.9     602.7
GR   26.2     8348.7    25.9      8354.5     19.3      8374.3     18.8      8386.1     19.4      8435.5
GR   36.0     8444.4    36.0      8621.9     22.7      8629.2     17.4      8674.5     17.3      8682.6
GR   16.8     8685.0    16.0      8740.0     17.9      8748.6     17.8      8773.4     16.5      8776.7
GR   16.5     8833.9    16.9      8844.9     18.0      8881.7     17.6      9186.8     15.8      9201.1
GR   14.4     9301.3    16.1      9434.5     43.7      9444.0     43.8      9832.8     17.8      9837.7
GR   17.1     9849.4    15.7      9851.5     14.8      9909.3     16.6      9913.6     15.7      9944.9
GR   15.7     9986.2    14.4      9991.4     14.5      10000.0    14.8      10013.6    16.2      10015.8
GR   15.9     10056.7   17.0      10068.5    18.1      10073.6    17.9      10089.9    16.1      10096.5
GR   18.6     10151.9   21.2      10174.3    35.6      10175.7    35.6      10324.5    19.3      10334.7
GR   18.4     10381.4   19.4      10438.5    37.5      10439.6    37.4      10681.1    18.8      10689.3
GR   18.8     10742.0   37.8      10750.5    37.8      10984.0    18.9      10993.3    19.6      11048.4
GR   37.1     11051.4   37.1      11178.7    17.9      11191.4    17.5      11245.8    19.5      11255.9
GR   19.2     11275.0   16.7      11284.4    17.3      11317.7    18.2      11318.9    17.7      11332.6
GR   17.2     11334.4   17.2      11368.0    19.0      11379.4    19.0      11387.4    20.2      11401.8
GR   20.2     11411.3   41.9      11421.7    41.9      11684.6    19.7      11688.6    17.9      11744.0
GR   18.1     11746.3   18.8      11764.7    18.1      11767.0    18.9      11866.6    19.6      11867.4
GR   20.0     11902.4   21.1      11910.3    21.1      11919.3    19.2      11942.1    19.4      12196.9
GR   19.6     12273.9   21.4      12284.9    21.3      12292.3    19.4      12299.4    19.3      12309.5

ET            5.1       7.1                  8062.2    11450.     8062.2    11327.5
NC   .045     .045      .045
QT   2.       2270.     1938.
        PLUMERIA DR
X1   174.     94.       9985.3    10015.9    854.      1299.      819.
GR   27.5     8054.3    27.4      8062.2     22.0      8075.8     21.2      8090.8     21.4      8136.0
GR   51.7     8158.3    51.7      8365.3     22.3      8373.5     20.2      8413.6     20.0      8468.2
GR   22.4     8475.8    22.1      8479.7     19.1      8487.1     18.6      8506.5     19.0      8540.8
GR   18.6     8561.9    19.3      8565.0     20.1      8584.6     19.1      8598.8     19.9      8655.3
GR   21.5     8701.3    56.7      8724.2    56.7      8892.3    20.5      8903.4    20.5      8943.5
GR   51.8     8956.1    51.8      9139.7    20.3      9147.7    21.3      9327.0    39.3      9337.9
GR   39.3     9510.4    20.2      9513.0    20.0      9537.9    20.7      9565.4    41.0      9572.0
GR   41.0     9819.8    20.4      9826.8    16.8      9842.5    15.3      9905.1    19.3      9918.4
GR   19.7     9926.9    18.7      9938.5    17.5      9947.7    17.9      9985.3    16.3      9988.3
GR   16.3     10000.0   16.1      10013.4   17.6      10015.9   17.6      10056.9   18.3      10071.0
GR   20.4     10079.6   19.9      10085.4   17.4      10095.2   18.3      10150.5   20.4      10165.8
GR   36.8     10168.7   36.8      10330.2   20.3      10333.9   20.3      10394.2   37.2      10397.6
GR   36.9     10758.7   19.5      10765.9   16.0      10872.9   16.2      10886.5   20.0      10977.5
GR   20.7     10989.8   36.5      10999.1   36.5      11139.8   20.9      11148.2   18.6      11172.7
GR   18.2     11230.2   21.2      11239.2   21.5      11260.5   19.3      11268.6   19.9      11304.4
GR   21.5     11313.5   22.1      11327.5   19.9      11341.2   19.5      11374.4   20.2      11376.8
GR   20.8     11387.7   22.7      11396.2   22.6      11408.5   19.2      11420.5   19.6      11474.3
GR   20.7     11486.9   53.1      11498.7   53.1      11619.5   21.8      11626.6   20.7      11678.6
GR   55.4     11692.7   55.4      11827.7   21.0      11839.5   21.0      11853.5

ET            5.1       7.1                 8450.     11280.    8450.     11244.8
NC   .045     .045      .045
X1   176.0    90.       9930.3    10066.7   338.8     235.1     466.4
GR   28.0     8195.6    28.0      8201.5    20.6      8216.9    19.3      8233.2    19.5      8567.3
GR   17.9     8620.5    19.3      8625.8    18.9      8656.8    18.6      8658.9    19.1      8683.2
GR   18.4     8717.1    20.8      8743.1    21.8      8780.4    19.6      8827.4    20.0      8868.1
GR   22.3     8886.7    21.9      8912.3    19.5      8921.9    19.4      8958.8    20.7      8964.0
GR   20.7     8983.6    19.5      8997.9    19.0      9256.5    19.3      9267.6    19.6      9331.9
GR   19.4     9341.8    18.8      9498.9    18.5      9576.0    18.5      9585.3    19.7      9592.4
GR   19.4     9608.2    18.8      9707.7    17.5      9930.3    17.9      9967.0    18.4      10000.0
GR   17.5     10027.9   16.7      10066.7   17.7      10071.8   18.8      10121.4   20.0      10193.3
GR   20.6     10321.4   20.1      10348.0   17.6      10360.2   17.8      10388.6   19.9      10405.6
GR   20.5     10572.8   21.1      10712.4   21.7      10942.6   20.3      10951.4   19.9      10956.8
GR   23.3     11244.8   22.7      11258.7   20.9      11284.6   21.1      11333.5   20.5      11379.4
GR   20.8     11388.9   23.2      11414.6   22.4      11523.4   21.4      11595.5   22.4      11639.4
GR   20.8     11712.8   20.7      11742.3   21.4      11752.9   23.1      11846.1   22.9      11919.1
GR   21.4     12074.7   21.1      12109.4   21.6      12124.3   22.2      12177.6   22.8      12266.6
GR   22.7     12427.7   23.3      12444.9   23.2      12459.0   22.1      12482.8   22.4      12510.3
GR   22.0     12531.8   22.8      12542.4   23.8      12555.2   25.0      12841.1   24.1      12856.4
GR   23.8     12885.1   25.4      12921.8   26.0      12971.9   24.4      13000.4   25.3      13076.3
GR   23.5     13154.8   23.2      13168.0   23.8      13172.3   24.7      13252.7   26.4      13292.3

ET            5.1       7.1                 8209.     11323.    8209.     11323.
NH   4.       .09       8670.2    .045      11323.    .09       11762.9   .045      14173.3
QT   2.       2270.     1916.
X1   178.0    40.0      9598.7    10068.5   220.0     432.0     61.0
GR   27.9     8202.6    27.8      8209.0    21.5      8227.5    21.0      8643.3    18.6      8670.2
GR   18.8     8787.7    19.2      8994.1    18.9      9319.9    18.6      9598.7    17.5      9932.3
GR   18.8     10000.0   17.5      10021.3   16.6      10068.5   17.5      10346.0   18.1      10558.7
GR   18.8     10706.1   19.2      10939.1   21.4      11242.7   21.5      11323.0   20.3      11390.0
GR   21.0     11762.9   21.0      11933.2   21.3      12077.7   21.0      12147.2   20.9      12251.0
GR   21.6     12457.9   22.0      12496.4   21.9      12524.3   22.9      12693.6   24.5      12967.8
GR   24.5     13019.2   25.4      13064.7   24.4      13175.3   24.3      13221.6   25.7      13370.0
GR   27.4     13525.6   29.0      13738.9   29.5      13966.5   29.7      14046.1   29.3      14173.3
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ET           5.1        7.1                   8260.6     11778.3    8260.6     11149.6
NH   3.      .045       11264.4    .09        11742.2    .045       14225.7
QT   2.      2270.      1862.
X1   180.0   80.0       9921.9     10079.0    237.1      393.5      51.9
GR   28.2    8255.8     28.2       8260.6     20.8       8278.0     19.6       8691.3     18.8     8707.9
GR   19.6    8738.3     19.5       8746.9     18.6       8822.6     19.2       9019.1     18.7     9219.8
GR   19.1    9318.5     18.4       9472.1     18.8       9499.2     19.9       9534.3     19.8     9588.3
GR   18.8    9666.0     18.7       9744.0     17.4       9921.9     17.8       9952.7     18.6     10000.0
GR   16.9    10067.1    17.5       10079.0    18.2       10081.1    19.0       10168.2    21.3     10229.0
GR   19.6    10276.8    18.0       10339.8    18.2       10424.4    19.7       10467.3    19.4     10642.6
GR   18.8    10647.9    19.0       10676.0    19.0       10682.9    19.7       10967.5    23.6     11149.6
GR   20.8    11264.4    21.5       11364.8    22.5       11570.3    22.5       11742.2    23.1     11778.3
GR   21.4    11784.6    21.5       11982.8    22.5       12024.6    22.5       12119.2    21.4     12129.1
GR   21.7    12153.9    22.0       12204.9    23.8       12309.7    22.9       12411.6    23.7     12428.9
GR   23.5    12462.6    21.7       12480.0    21.8       12541.7    24.6       12565.8    24.9     12640.4
GR   24.2    12692.0    23.2       12801.1    23.5       12830.7    24.4       12881.6    24.0     12946.0
GR   24.0    12993.7    25.7       13056.0    24.3       13145.2    24.9       13151.2    25.3     13163.4
GR   24.5    13200.9    24.3       13263.2    25.7       13328.8    26.9       13373.3    28.6     13448.7
GR   26.5    13511.8    27.9       13660.2    28.9       13724.9    30.4       13824.7    31.3     13858.5
GR   29.8    13967.6    29.3       14023.6    29.6       14077.7    29.7       14133.4    29.7     14225.7

ET           5.1        7.1                   8280.9     11470.     8280.9     11264.8
NH   3.      .045       11275.6    .09        11760.     .045       12068.1
X1   182.0   92.        9976.1     10052.4    184.6      25.9       132.7
GR   28.1    8275.5     28.0       8280.9     21.0       8296.7     20.0       8316.5     19.2     8470.5
GR   18.9    8547.5     19.9       8638.6     20.8       8644.2     21.1       8655.1     18.8     8662.8
GR   19.5    8702.2     21.2       8704.6     21.5       8710.0     21.1       8723.8     18.7     8734.5
GR   19.4    8768.9     18.8       8792.1     19.0       8796.8     19.8       8820.3     18.0     8829.2
GR   18.0    8875.4     19.8       8880.0     20.0       8908.9     30.4       8915.6     31.0     9081.5
GR   19.6    9086.0     16.7       9124.9     16.8       9157.0     30.6       9169.0     30.6     9360.3
GR   19.0    9362.4     17.3       9417.4     18.0       9419.1     17.6       9440.3     17.5     9441.8
GR   17.8    9497.9     18.2       9506.2     20.5       9563.1     42.3       9576.4     42.3     9828.6
GR   18.2    9835.9     17.8       9903.3     18.7       9906.5     20.6       9915.8     20.5     9936.0
GR   18.3    9944.7     18.6       9976.1     15.9       9981.2     15.8       10000.0    18.0     10013.5
GR   17.3    10052.4    17.6       10054.6    18.9       10068.7    20.5       10076.9    19.7     10085.6
GR   18.1    10090.8    20.4       10155.6    45.1       10157.3    45.1       10576.2    19.7     10586.5
GR   18.7    10648.3    19.6       10650.0    19.4       10673.1    18.8       10674.7    20.6     10735.9
GR   39.5    10751.2    39.5       11159.1    21.0       11169.2    21.0       11178.5    20.3     11181.4
GR   19.9    11238.1    23.1       11248.8    23.2       11264.8    21.9       11275.6    22.2     11322.3
GR   22.7    11324.5    22.4       11336.5    21.5       11344.0    21.2       11755.1    23.3     11760.0
GR   23.1    11777.4    21.2       11784.3    21.0       11797.5    20.8       11856.2    20.8     11875.9
GR   21.6    11923.3    21.7       11947.1    21.1       11996.9    21.6       12018.1    22.2     12019.7
GR   23.1    12055.1    58.6       12068.1

ET           5.1        7.1                   8296.9     11750.     8296.9     11361.2
NH   3.      .045       11351.2    .09        11962.6    .045       12089.2
QT   2.      2270.      1800.
X1   184.0   90.        9986.5     10015.5    638.2      354.4      625.2
GR   27.9    8292.5     27.9       8296.9     19.1       8316.4     19.1       8330.2     19.0     8332.6
GR   20.8    8394.3     42.5       8406.5     42.5       8707.0     20.5       8714.1     19.3     8749.2
GR   19.2    8754.4     19.1       8757.4     18.7       8797.1     19.4       8798.4     20.7     8804.2
GR   20.1    8825.8     18.6       8830.1     18.7       8886.6     19.8       8888.8     22.1     8904.0
GR   23.2    8919.7     30.6       8927.3     30.6       9091.3     20.1       9092.2     20.1     9151.1
GR  37.8      9158.1    37.8      9339.1    20.4      9345.9    17.3      9422.7    15.9      9481.5
GR  17.1      9484.8    17.6      9500.7    16.3      9504.9    20.5      9629.2    39.2      9634.8
GR  39.2      9885.6    19.8      9890.8    19.8      9921.0    20.1      9927.8    20.0      9944.6
GR  19.2      9946.5    19.3      9986.5    17.3      9988.5    17.3      10000.0   17.3      10013.5
GR  18.3      10015.5   18.7      10056.7   21.3      10067.6   21.8      10079.8   23.8      10082.8
GR  23.5      10093.7   22.4      10096.6   21.6      10161.3   45.5      10169.1   45.5      10496.4
GR  22.3      10506.1   21.0      10580.9   19.4      10616.6   20.1      10676.1   20.7      10678.2
GR  20.8      10697.0   20.2      10699.1   21.0      10758.8   21.5      10818.3   43.6      10837.7
GR  43.6      11201.9   20.3      11209.1   19.1      11339.6   20.3      11343.1   22.4      11351.2
GR  22.4      11361.2   19.9      11377.1   20.1      11411.5   20.6      11415.0   21.5      11599.3
GR  21.2      11672.4   20.6      11704.0   21.2      11712.2   19.7      11786.9   20.6      11827.7
GR  20.4      11887.9   21.6      11896.9   20.9      11906.0   20.3      11908.4   22.0      11917.1
GR  21.4      11923.9   20.0      11939.7   20.6      11962.6   22.3      12077.5   21.8      12089.2

ET            5.1       7.1                 8204.3    11790.4   8204.3    11295.9
NH  2.        .045      11338.6   .09       11846.6
QT  2.        2270.     1521.
X1  186.0     80.       9978.7    10055.8   304.0     676.5     337.7
GR  27.5      8199.3    27.2      8204.3    18.6      8225.0    17.6      8240.8    19.6      8298.6
GR  20.2      8299.8    21.0      8357.4    42.8      8371.8    42.8      8652.3    21.7      8660.2
GR  21.7      8674.6    19.5      8686.3    19.5      8691.5    19.2      8692.5    19.0      8734.9
GR  19.8      8736.4    20.2      8742.6    19.7      8763.0    19.0      8767.5    19.3      8825.3
GR  21.7      8837.8    23.0      8842.7    23.1      8852.9    24.2      8857.4    23.7      8871.2
GR  31.3      8879.4    31.3      9093.0    21.3      9095.8    21.3      9115.6    22.6      9125.1
GR  22.3      9137.8    21.0      9142.7    21.0      9152.3    30.8      9157.4    31.1      9348.7
GR  21.3      9350.9    17.2      9480.2    22.2      9500.8    20.6      9941.0    20.3      9945.3
GR  21.2      9978.7    19.7      9983.7    18.7      10000.0   18.7      10016.7   20.5      10055.8
GR  20.9      10058.3   22.3      10090.5   46.4      10098.7   46.4      10205.7   21.0      10213.8
GR  20.0      10232.5   20.5      10274.2   41.5      10279.3   41.3      10377.5   20.6      10383.1
GR  20.0      10435.6   21.3      10476.1   42.7      10482.6   42.7      10662.0   21.9      10669.7
GR  22.5      10712.2   42.1      10722.6   42.1      10951.6   22.2      10958.5   22.0      11002.9
GR  43.2      11017.1   43.2      11292.2   22.8      11295.9   22.8      11318.3   20.0      11338.6
GR  20.9      11377.6   22.3      11475.2   22.9      11538.1   22.8      11596.5   21.1      11687.7
GR  22.1      11749.4   30.9      11755.5   32.1      11790.4   26.4      11792.0   26.3      11846.6

ET            5.1       7.1                 8275.     12000.    8275.     11361.1
NC  .045      .045      .045
QT  2.        2270.     1293.
X1  188.0     90.       9983.1    10016.3   307.6     408.4     365.5
GR  27.8      8047.8    27.5      8051.8    20.3      8070.3    19.1      8120.5    17.3      8198.2
GR  17.9      8320.2    17.9      8455.3    19.0      8550.1    19.5      8552.9    20.1      8561.5
GR  19.2      8572.9    17.6      8581.8    19.6      8667.2    19.2      8673.9    19.6      8706.9
GR  19.8      8739.4    15.6      8928.1    18.8      9064.7    19.9      9067.0    20.2      9072.8
GR  30.9      9079.8    30.9      9324.2    21.2      9329.1    19.8      9461.4    22.4      9480.4
GR  22.4      9488.5    20.7      9573.8    22.0      9646.7    73.4      9660.6    73.4      9812.3
GR  24.3      9828.1    21.1      9842.5    20.1      9904.0    22.1      9930.0    22.4      9983.1
GR  20.5      9986.4    20.5      10000.0   20.5      10010.6   22.3      10016.3   21.6      10055.5
GR  22.5      10057.6   23.7      10076.3   24.1      10088.5   47.9      10096.8   47.9      10201.6
GR  21.8      10213.6   20.0      10225.7   20.5      10281.2   21.7      10285.1   22.7      10325.1
GR  42.7      10331.9   42.7      10430.3   21.1      10435.8   21.8      10469.2   40.0      10476.3
GR  40.0      10576.1   21.9      10586.7   22.0      10622.8   42.5      10627.6   42.5      10979.8
GR  21.0      10991.2   21.1      11010.2   42.4      11024.0   42.3      11280.3   22.0      11286.3
GR  21.6      11320.0   21.0      11321.6   21.3      11355.7   23.3      11361.6   22.6      11433.8
GR  22.6      11558.7   21.6      11564.9   21.3      11650.5   21.5      11693.3   32.0      11704.0
GR   32.0    11744.4    22.0     11747.0    22.0     11791.5    22.3     11799.8    22.7     11812.2
GR   22.3    11818.5    24.6     11936.5    24.4     11941.8    23.4     11985.0    49.0     11997.5
GR   49.0    12418.7    24.2     12426.5    22.2     12490.5    23.5     12546.1    24.9     12553.3
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     SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
     Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
     TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*PROF 1



1490 NH CARD USED
*SECNO 150.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=      8472.0    11450.0  TYPE=       1  TARGET=      2978.000
        STARTING WSEL FROM DECK 1
   150.000      3.06      13.96        .00        .00      13.99        .03        .00        .00      12.70
    2270.0     999.6      264.5     1005.9      658.7      102.0     1418.2         .0         .0      10.90
       .00      1.52       2.59        .71       .045       .045       .088       .000      10.90    8472.00
   .001536      620.       701.       721.          0          0          0        .00    2044.42   11450.00


FLOW DISTRIBUTION FOR SECNO=     150.00          CWSEL=      13.96

STA=    8472.     8607.     8759.     9858.     9907.     9944.     9985.    10021.    10303.    10555.    10886.    11179.    11450.
  PER Q=      15.1      11.4       5.2       4.1       3.0       5.2      11.7       7.8       3.6       4.9      10.7      17.3
   AREA=     201.6     179.3     103.7      61.7      45.9      66.4     102.0     248.4     166.5     222.3     340.3     440.6
    VEL=       1.7       1.4       1.1       1.5       1.5       1.8       2.6        .7        .5        .5        .7        .9
  DEPTH=       1.5       1.2        .1       1.3       1.2       1.6       2.8        .9        .7        .7       1.2       1.6

1490 NH CARD USED
*SECNO 152.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=      8924.9    11250.0  TYPE=       1  TARGET=      2325.100
   152.000      3.13      14.73        .00        .00      14.77        .04        .77        .00      13.00
    2270.0    1016.0      332.3      921.7      616.5      123.7     1293.9       25.1       22.6      12.60
       .10      1.65       2.69        .71       .045       .045       .090       .000      11.60    8945.82
   .001538      483.       455.       540.          0          0          0        .00    1727.16   11213.75


FLOW DISTRIBUTION FOR SECNO=     152.00          CWSEL=      14.73

STA=    8946.     9049.     9128.     9415.     9903.     9942.     9981.    10022.    10639.    11213.    11214.
  PER Q=      11.6       3.5       3.6      14.1       4.4       7.5      14.6      29.6      11.0        .0
   AREA=     153.5      63.5      84.0     176.0      58.7      80.8     123.7     842.7     450.8        .4
    VEL=       1.7       1.3       1.0       1.8       1.7       2.1       2.7        .8        .6        .3
  DEPTH=       1.5        .8        .3        .4       1.5       2.1       3.0       1.4        .8        .5
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     SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
     Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
     TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 1490 NH CARD USED
 *SECNO 154.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.08


 3470 ENCROACHMENT STATIONS=     9209.2   11170.0  TYPE=      1  TARGET=     1960.800
         RIVER OAKS PKWY
    154.000       2.89      14.99        .00        .00      15.01        .02        .24        .00      12.80
     2270.0     2035.7      234.3         .0     1775.2      546.9         .0       43.1       34.7      15.10
        .20       1.15        .43        .00       .045       .062       .000       .000      12.10    9232.84
    .000355       405.       380.       270.          2          0          0        .00    1305.68   10538.53


 FLOW DISTRIBUTION FOR SECNO=     154.00          CWSEL=     14.99

 STA=    9233.     9239.     9263.     9891.     9946.    10046.    10574.
   PER Q=        .2       2.7      81.2       5.6       5.7       4.6
    AREA=       6.1      55.6    1593.2     120.3     155.7     391.1
     VEL=        .6       1.1       1.2       1.0        .8        .3
   DEPTH=        .9       2.4       2.5       2.2       1.6        .8

 1490 NH CARD USED
 *SECNO 156.000

 3265 DIVIDED FLOW


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.71


 3470 ENCROACHMENT STATIONS=     9232.1   11150.0  TYPE=      1  TARGET=     1917.900
    156.000       4.71      15.01        .00        .00      15.02        .01        .01        .00      13.20
     2270.0     2044.3      167.8       57.9     2349.9      344.5      351.2       46.8       36.5      13.20
        .22        .87        .49        .16       .045       .052       .088       .000      10.30    9254.12
    .000122        61.        55.        55.          2          0          0        .00    1380.22   11150.00


 FLOW DISTRIBUTION FOR SECNO=     156.00          CWSEL=     15.01
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    SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
    Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
    TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
    SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


STA=     9254.      9321.     9389.     9449.     9485.     9542.     9624.     9667.     9866.     9935.     9946.    10087.    10127.
  PER Q=      3.1        4.7       10.5       4.4       5.6      16.8       6.8      34.5       3.4        .4       6.2       1.1
   AREA=    124.0      160.6      249.6     122.9     166.6     378.4     168.5     829.2     132.5      17.6     259.3      85.3
    VEL=       .6         .7        1.0        .8        .8       1.0        .9        .9        .6        .5        .5        .3
  DEPTH=      1.9        2.3        4.2       3.4       2.9       4.6       4.0       4.2       1.9       1.7       1.8       2.2

STA=   10127.    11150.
  PER Q=      2.6
   AREA=    351.2
    VEL=       .2
  DEPTH=       .3

1490 NH CARD USED
*SECNO 158.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .30


3470 ENCROACHMENT STATIONS=     9190.1   11025.0  TYPE=       1  TARGET=     1834.900
   158.000       4.18      15.08        .00        .00      15.15        .06        .13        .00      12.70
    2270.0     1323.7      432.9      513.4      674.1      147.3      580.5       69.0       48.3      13.00
       .28       1.96       2.94        .88       .045       .045       .062       .000      10.90    9209.46
   .001339       445.       439.       403.          2          0          0        .00    1043.18   10772.69


FLOW DISTRIBUTION FOR SECNO=     158.00          CWSEL=      15.08

STA=     9209.     9241.     9281.     9637.     9832.     9855.     9888.     9905.     9941.     9983.    10021.    10066.    10609.
  PER Q=      4.3       9.2       3.1      12.7       5.9       7.5       3.3       4.3       8.1      19.1       7.5       9.6
   AREA=     54.4      96.5      45.2     153.9      59.3      79.3      36.4      58.8      90.4     147.3      89.2     397.7
    VEL=      1.8       2.2       1.6       1.9       2.2       2.2       2.1       1.7       2.0       2.9       1.9        .5
  DEPTH=      1.7       2.4        .1        .8       2.5       2.4       2.2       1.6       2.2       3.9       2.0        .7

STA=    10609.    10728.    10773.
  PER Q=      3.2       2.3
   AREA=     49.2      44.4
    VEL=      1.5       1.2
  DEPTH=       .4       1.0
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     SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
     Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
     TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 1490 NH CARD USED
 *SECNO 160.000

 3470 ENCROACHMENT STATIONS=      9050.0   10765.0  TYPE=      1  TARGET=      1715.000
    160.000       4.02      15.72       .00        .00      15.73        .01        .59        .00      13.40
     2270.0      963.9      130.6     1175.6     1351.6      115.0     1536.7       99.7       67.5      13.00
        .49        .71       1.14        .76       .090       .090       .090       .000      11.70    9103.83
    .000802       475.       469.       750.          2          0          0        .00    1661.17   10765.00


 FLOW DISTRIBUTION FOR SECNO=     160.00           CWSEL=      15.72

 STA=     9104.     9674.     9846.     9946.     9986.    10016.    10102.    10264.    10487.    10726.    10765.
   PER Q=      14.3      15.0       9.6       3.5       5.8       9.4      14.1      13.7      12.8       1.9
    AREA=     594.7     409.6     252.2      95.1     115.0     233.8     384.0     429.5     423.2      66.3
     VEL=        .5        .8        .9        .8       1.1        .9        .8        .7        .7        .6
   DEPTH=       1.0       2.4       2.5       2.4       3.9       2.7       2.4       1.9       1.8       1.7

 1490 NH CARD USED
 *SECNO 162.000

 3470 ENCROACHMENT STATIONS=      9120.0   10600.0  TYPE=      1  TARGET=      1480.000
    162.000       4.00      16.10       .00        .00      16.11        .01        .38        .00      13.60
     2270.0     1313.9      162.8      793.3     1638.4      133.1     1048.4      128.6       83.1      13.30
        .64        .80       1.22        .76       .090       .090       .090       .000      12.10    9120.00
    .000940       456.       471.       400.          2          0          0        .00    1480.00   10600.00


 FLOW DISTRIBUTION FOR SECNO=     162.00           CWSEL=      16.10

 STA=     9120.     9197.     9275.     9592.     9739.     9926.     9983.    10018.    10055.    10106.    10600.
   PER Q=       5.3       6.9      13.3       6.8      19.0       6.5       7.2       4.4       3.4      27.1
    AREA=     153.4     178.1     463.2     228.6     464.2     150.9     133.1     101.1      98.8     848.5
     VEL=        .8        .9        .7        .7        .9       1.0       1.2       1.0        .8        .7
   DEPTH=       2.0       2.3       1.5       1.5       2.5       2.7       3.8       2.7       1.9       1.7

 1490 NH CARD USED
 *SECNO 164.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .48
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     SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
     Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
     TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
     SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


 3470 ENCROACHMENT STATIONS=      9180.0    10450.0  TYPE=       1  TARGET=      1270.000
        MONTAGUE EXPWY
    164.000       2.51      16.71        .00        .00      16.75        .03        .64        .00      15.00
     2270.0      905.0      141.6     1223.4      790.5      153.1      716.1      147.8       95.1      16.10
        .71       1.14        .92       1.71       .090       .090       .090       .000      14.20    9180.00
    .004141       411.       416.       320.          2          0          0        .00    1270.00   10450.00


 FLOW DISTRIBUTION FOR SECNO=     164.00           CWSEL=      16.71

 STA=    9180.    9231.    9254.    9362.    9872.    9908.    9911.   10099.   10121.   10450.
   PER Q=      6.5       2.2       6.1      22.5       2.4        .3       6.2       2.1      51.8
    AREA=     93.8      35.6     120.2     492.2      44.2       4.5     153.1      33.7     682.5
     VEL=      1.6       1.4       1.1       1.0       1.2       1.5        .9       1.4       1.7
   DEPTH=      1.9       1.5       1.1       1.0       1.2       1.7        .8       1.6       2.1

 1490 NH CARD USED
 *SECNO 166.000

 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .40


 3470 ENCROACHMENT STATIONS=      9200.0    10400.0  TYPE=       1  TARGET=      1200.000
    166.000        .99      17.29      17.27        .00      17.54        .25        .79        .00      16.90
     2270.0     1983.0      286.9         .1      472.6      153.0         .2      150.3       97.7      17.20
        .72       4.20       1.88        .35       .045       .061       .090       .000      16.30    9228.83
    .025628        94.        94.        94.          7         22          0        .00    1147.76   10376.59


 FLOW DISTRIBUTION FOR SECNO=     166.00           CWSEL=      17.29

 STA=     9229.    9280.    9612.    9918.   10044.   10372.   10377.
   PER Q=      1.2      47.4      38.8       7.7       5.0        .0
    AREA=     12.6     247.8     212.2      56.4      96.6        .2
     VEL=      2.1       4.3       4.1       3.1       1.2        .3
   DEPTH=       .2        .7        .7        .4        .3        .0

 1490 NH CARD USED
 *SECNO 168.000
 SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
 Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
 TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
 SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO = 10.55


3470 ENCROACHMENT STATIONS=     9160.0   10470.0  TYPE=      1  TARGET=      1310.000
   168.000      3.80     17.60       .00       .00     17.61       .01       .07       .00     15.50
    2270.0    1897.8     226.2     146.0    1931.4     328.8     310.3     153.8     100.3     16.00
       .74       .98       .69       .47      .045      .045      .045      .000     13.80   9160.00
   .000230       94.       94.       94.         3         0         0       .00   1310.00  10470.00


FLOW DISTRIBUTION FOR SECNO=    168.00          CWSEL=     17.60

STA=    9160.     9239.     9267.     9475.     9488.     9631.     9925.    10130.    10470.
  PER Q=       5.6       1.4       8.5       1.3      27.3      39.4      10.0       6.4
   AREA=     161.0      44.8     302.2      32.2     522.6     868.6     328.8     310.3
    VEL=        .8        .7        .6        .9       1.2       1.0        .7        .5
  DEPTH=       2.0       1.6       1.4       2.6       3.6       2.9       1.6        .9

*SECNO 170.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     9100.0   10770.0  TYPE=      1  TARGET=      1670.000
   170.000      3.96     17.76       .00       .00     17.78       .02       .17       .00     15.60
    2270.0    1312.0     224.2     733.8    1132.4     140.0     664.7     182.1     113.5     14.70
       .87      1.16      1.60      1.10      .045      .045      .045      .000     13.80   9100.00
   .000399      635.      535.      280.         3         0         0       .00    935.08  10770.00


FLOW DISTRIBUTION FOR SECNO=    170.00          CWSEL=     17.76

STA=    9100.     9133.     9211.     9288.     9525.     9614.     9904.     9945.     9984.    10020.    10060.    10090.    10121.
  PER Q=       5.1       6.2       6.4       5.8      16.3      10.4       3.4       4.4       9.9       6.8       3.9       5.7
   AREA=      92.2     139.2     130.4     126.1     268.5     212.6      76.4      87.0     140.0     114.9      73.3      94.0
    VEL=       1.2       1.0       1.1       1.0       1.4       1.1       1.0       1.1       1.6       1.3       1.2       1.4
  DEPTH=       2.8       1.8       1.7        .5       3.0        .7       1.9       2.3       3.9       2.9       2.4       3.0

STA=   10121.    10268.    10770.
  PER Q=      14.2       1.7
   AREA=     302.6      79.8
    VEL=       1.1        .5
  DEPTH=       2.1        .2
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     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 1490 NH CARD USED
 *SECNO 172.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     8750.0   11320.0  TYPE=       1  TARGET=      2570.000
    172.000      3.95     18.35       .00       .00     18.37       .02       .59       .00     15.70
     2270.0    1784.3     198.3     287.4    1484.1     107.2     278.6     239.2     147.1     16.20
       1.15      1.20      1.85      1.03      .054      .045      .045      .000     14.40   8750.00
    .000579      666.      603.     3267.         2         0         0       .00   1094.71  11320.00


 FLOW DISTRIBUTION FOR SECNO=     172.00          CWSEL=      18.35

 STA=    8750.     8834.     9201.     9301.     9435.     9909.     9945.     9986.    10016.    10057.    10146.    11318.    11320.
   PER Q=      6.0       3.5      12.5      30.7      13.9       4.8       7.3       8.7       5.7       3.9       3.0        .0
    AREA=    121.2     241.3     325.3     412.4     194.4      80.1     109.3     107.2      93.9      96.9      86.9        .9
     VEL=      1.1        .3        .9       1.7       1.6       1.4       1.5       1.9       1.4        .9        .8        .4
   DEPTH=      1.4        .7       3.2       3.1        .4       2.3       2.6       3.6       2.3       1.1        .1        .4

 *SECNO 174.000

 3265 DIVIDED FLOW


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =    .50


 3470 ENCROACHMENT STATIONS=     8062.2   11327.5  TYPE=       1  TARGET=      3265.300
          PLUMERIA DR
    174.000      3.88     19.18       .00       .00     19.25       .07       .88       .00     17.90
     1938.0     776.8     228.7     932.5     328.6      85.7     517.0     270.6     167.0     17.60
       1.28      2.36      2.67      1.80      .045      .045      .045      .000     15.30   8486.90
    .001715      854.      819.     1299.         2         0         0       .00    629.30  11233.14


 FLOW DISTRIBUTION FOR SECNO=     174.00          CWSEL=      19.18

 STA=    8487.     9905.     9948.     9985.    10016.    10057.    10151.    10873.    10887.    10958.    11233.
   PER Q=     31.5       3.4       5.1      11.8       6.2       8.1      15.0       6.3       9.8       2.8
    AREA=    236.7      36.3      55.6      85.7      64.8      98.6     157.3      41.9     106.3      48.0
     VEL=      2.6       1.8       1.8       2.7       1.9       1.6       1.8       2.9       1.8       1.1
   DEPTH=       .2        .9       1.5       2.8       1.6       1.1        .2       3.1       1.5        .2
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  SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
  Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
  TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
  SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 176.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     8450.0   11244.8  TYPE=      1  TARGET=     2794.800
   176.000      3.01     19.71       .00       .00     19.75       .03       .50       .00     17.50
    1938.0    1105.7     532.8     299.5     932.5     275.8     193.0     279.4     175.2     16.70
      1.35      1.19      1.93      1.55      .045      .045      .045      .000     16.70   8450.00
   .001338      339.      466.      235.         2         0         0       .00   1568.86  10404.07


FLOW DISTRIBUTION FOR SECNO=    176.00          CWSEL=     19.71

STA=    8450.    8621.    8717.    9257.    9499.    9576.    9708.    9930.   10067.   10121.   10389.   10404.
   PER Q=     4.1      4.5      5.1      5.1      5.3      3.8     29.2     27.5      7.3      7.3       .9
    AREA=    82.8     80.4    139.6    121.2     81.8     79.0    347.6    275.8     85.3     92.9     14.8
     VEL=     1.0      1.1       .7       .8      1.3       .9      1.6      1.9      1.7      1.5      1.2
   DEPTH=      .5       .8       .3       .5      1.1       .6      1.6      2.0      1.6       .3      1.0

1490 NH CARD USED
*SECNO 178.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.97


3470 ENCROACHMENT STATIONS=     8209.0   11323.0  TYPE=      1  TARGET=     3114.000
   178.000      3.23     19.83       .00       .00     19.83       .01       .08       .00     18.60
    1916.0     329.2     527.9    1058.9     860.9     871.1    1620.4     293.7     186.7     16.60
      1.46       .38       .61       .65      .045      .045      .045      .000     16.60   8656.50
   .000148      220.       61.      432.         2         0         0       .00   2368.54  11025.03


FLOW DISTRIBUTION FOR SECNO=    178.00          CWSEL=     19.83

STA=    8656.    8788.    8994.    9320.    9599.   10069.   10346.   10559.   10706.   10939.   11025.
   PER Q=     3.0      3.1      4.4      6.6     27.6     31.8     14.4      5.2      3.5       .3
    AREA=   140.3    169.8    251.7    299.1    871.1    769.4    430.2    202.3    191.7     26.8
     VEL=      .4       .4       .3       .4       .6       .8       .6       .5       .4       .2
   DEPTH=     1.1       .8       .8      1.1      1.9      2.8      2.0      1.4       .8       .3
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


1490 NH CARD USED
*SECNO 180.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .54


3470 ENCROACHMENT STATIONS=     8260.6   11149.6  TYPE=       1  TARGET=      2889.000
   180.000      2.98     19.88       .00       .00     19.89       .01       .06       .00     17.40
    1862.0    1018.1     381.3     462.6    1275.8     324.7     633.7     310.4     201.3     17.50
      1.55       .80      1.17       .73      .045      .045      .045      .000     16.90   8594.50
   .000481      237.       52.      394.         2         0         0       .00   2293.20  10975.95


FLOW DISTRIBUTION FOR SECNO=    180.00          CWSEL=     19.88

STA=    8595.    8823.    9019.    9220.    9319.    9472.    9666.    9744.    9922.   10079.   10168.   10340.   10424.
  PER Q=      3.3      7.4      6.9      3.7      7.3      3.3      3.7     19.0     20.5      5.4      3.0      8.6
   AREA=    111.4    192.8    186.9     96.8    173.7    100.3     88.2    325.7    324.7    115.8     79.5    150.7
    VEL=       .6       .7       .7       .7       .8       .6       .8      1.1      1.2       .9       .7      1.1
  DEPTH=       .5      1.0       .9      1.0      1.1       .5      1.1      1.8      2.1      1.3       .5      1.8

STA=   10424.   10676.   10968.   10976.
  PER Q=      3.8      4.1       .0
   AREA=    129.7    157.2       .8
    VEL=       .5       .5       .1
  DEPTH=       .5       .5       .1

1490 NH CARD USED
*SECNO 182.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     8280.9   11264.8  TYPE=       1  TARGET=      2983.899
   182.000      4.15     19.95       .00       .00     19.98       .03       .09       .00     18.60
    1862.0    1327.3     394.1     140.6    1092.2     221.6     168.7     316.5     206.7     17.30
      1.58      1.22      1.78       .83      .045      .045      .045      .000     15.80   8325.94
   .000711      185.      133.       26.         2         0         0       .00   1199.02  11238.27
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      SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
      Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
      TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
      SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


   FLOW DISTRIBUTION FOR SECNO=    182.00          CWSEL=      19.95

   STA=    8326.     8548.     8735.     8829.     8875.     9125.     9157.     9417.     9440.     9498.     9903.     9976.   10052.
     PER Q=      4.4       3.1       3.3       6.7       5.1      10.6       7.1       3.9      10.9      12.6       3.6      21.2
      AREA=    123.7      87.6      78.0      90.1      76.6     102.8     103.5      49.5     132.7     186.1      61.8     221.6
       VEL=       .7        .7        .8       1.4       1.2       1.9       1.3       1.5       1.5       1.3       1.1       1.8
     DEPTH=       .6        .5        .8       2.0        .3       3.2        .4       2.2       2.3        .5        .8       2.9

   STA=   10052.    10143.    11238.
     PER Q=      4.6       2.9
      AREA=     86.4      82.3
       VEL=      1.0        .7
     DEPTH=      1.0        .1

   1490 NH CARD USED
   *SECNO 184.000

   3265 DIVIDED FLOW


   3470 ENCROACHMENT STATIONS=     8296.9   11361.2  TYPE=      1  TARGET=      3064.300
       184.000      4.48     20.38       .00       .00     20.41       .03       .44       .00     19.30
        1800.0    1443.4     154.3     202.3    1003.8      86.4     224.7     335.7     220.9     18.30
          1.70      1.44      1.79       .90      .045      .045      .045      .000     15.90   8313.56
       .000717      638.      625.      354.         2         0         0       .00    971.11  11343.42


   FLOW DISTRIBUTION FOR SECNO=    184.00          CWSEL=      20.38

   STA=    8314.     8749.     8797.     8887.     9423.     9482.     9501.     9626.     9987.    10016.    10057.    11340.    11343.
     PER Q=      3.1       4.3       7.3       8.2      26.5       6.4      21.0       3.3       8.6       5.8       5.3        .1
      AREA=     72.6      68.4     107.6     137.9     222.4      61.0     261.0      72.9      86.4      77.5     144.7       2.4
       VEL=       .8       1.1       1.2       1.1       2.1       1.9       1.5        .8       1.8       1.3        .7        .7
     DEPTH=       .2       1.4       1.2        .3       3.8       3.2       2.1        .2       3.0       1.9        .1        .6

   1490 NH CARD USED
   *SECNO 186.000

   3265 DIVIDED FLOW
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      SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
      Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
      TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
      SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .50


3470 ENCROACHMENT STATIONS=      8204.3   11295.9  TYPE=       1  TARGET=      3091.601
    186.000       3.51      20.71        .00        .00      20.78        .07        .36        .00      21.20
     1521.0     1288.9      188.8       43.2      604.5      102.8       52.5      344.2      228.4      20.50
       1.74       2.13       1.84        .82       .045       .045       .045       .000      17.20    8219.94
    .002059       304.       338.       677.          1          0          0        .00     647.38   10457.50


FLOW DISTRIBUTION FOR SECNO=    186.00          CWSEL=     20.71

STA=     8220.     8241.     8299.     8735.     8825.     9480.     9495.     9960.    10056.    10458.
  PER Q=       8.2       19.7       10.7       14.4       28.1        3.6         .2       12.4        2.8
   AREA=      46.5      121.6       89.5      117.5      198.6       25.3        5.6      102.8       52.5
    VEL=       2.7        2.5        1.8        1.9        2.2        2.1         .5        1.8         .8
  DEPTH=       2.2        2.1         .2        1.3         .3        1.8         .0        1.4         .1

*SECNO 188.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.48


3470 ENCROACHMENT STATIONS=      8275.0   11361.1  TYPE=       1  TARGET=      3086.100
    188.000       5.24      20.84        .00        .00      20.85        .00        .07        .00      22.40
     1293.0     1284.8        1.2        7.0     2273.0        8.6       35.5      355.2      234.7      22.30
       1.90        .57        .14        .20       .045       .045       .045       .000      15.60    8275.00
    .000074       308.       366.       408.          2          0          0        .00    1063.06   10282.31


FLOW DISTRIBUTION FOR SECNO=    188.00          CWSEL=     20.84

STA=     8275.     8320.     8455.     8550.     8667.     8928.     9065.     9914.    10016.    10282.
  PER Q=       6.1       18.0        8.9        8.7       30.5       25.9        1.2         .1         .5
   AREA=     138.0      397.6      226.8      240.3      687.5      497.6       85.2        8.6       35.5
    VEL=        .6         .6         .5         .5         .6         .7         .2         .1         .2
  DEPTH=       3.1        2.9        2.4        2.1        2.6        3.6         .1         .3         .1
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                                                                    THIS RUN EXECUTED 26JUN95    14:58:31
**************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
**************************************


NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


50% BLOCKED CONDITIONS 1

SUMMARY PRINTOUT


      SECNO     XLCH       Q     STENCL     SSTA     STCHL     STCHR     ENDST    STENCR    TOPWID     10*KS      EG

     150.000      .00   2270.00  8472.00  8472.00  9985.40  10021.20  11450.00  11450.00  2044.42     15.36    13.99

     152.000   455.00   2270.00  8924.90  8945.82  9981.40  10022.30  11213.75  11250.00  1727.16     15.38    14.77

*    154.000   379.70   2270.00  9209.20  9232.84  9945.50  10573.50  10538.53  11170.00  1305.68      3.55    15.01

*    156.000    55.30   2270.00  9232.10  9254.12  9945.90  10126.60  11150.00  11150.00  1380.22      1.22    15.02

*    158.000   438.90   2270.00  9190.10  9209.46  9982.70  10020.70  10772.69  11025.00  1043.18     13.39    15.15

     160.000   469.10   2270.00  9050.00  9103.83  9986.30  10015.90  10765.00  10765.00  1661.17      8.02    15.73

     162.000   470.60   2270.00  9120.00  9120.00  9982.80  10017.90  10600.00  10600.00  1480.00      9.40    16.11

*    164.000   416.00   2270.00  9180.00  9180.00  9911.00  10099.40  10450.00  10450.00  1270.00     41.41    16.75

*    166.000    94.00   2270.00  9200.00  9228.83  9917.60  10371.60  10376.59  10400.00  1147.76    256.28    17.54

*    168.000    94.30   2270.00  9160.00  9160.00  9925.20  10129.50  10470.00  10470.00  1310.00      2.30    17.61

     170.000   534.90   2270.00  9100.00  9100.00  9983.90  10020.20  10770.00  10770.00   935.08      3.99    17.78

     172.000   602.70   2270.00  8750.00  8750.00  9986.20  10015.80  11320.00  11320.00  1094.71      5.79    18.37

*    174.000   819.00   1938.00  8062.20  8486.90  9985.30  10015.90  11233.14  11327.50   629.30     17.15    19.25

     176.000   466.40   1938.00  8450.00  8450.00  9930.30  10066.70  10404.07  11244.80  1568.86     13.38    19.75

*    178.000    61.00   1916.00  8209.00  8656.50  9598.70  10068.50  11025.03  11323.00  2368.54      1.48    19.83

*    180.000    51.90   1862.00  8260.60  8594.50  9921.90  10079.00  10975.95  11149.60  2293.20      4.81    19.89

     182.000   132.70   1862.00  8280.90  8325.94  9976.10  10052.40  11238.27  11264.80  1199.02      7.11    19.98
     SECNO     XLCH        Q    STENCL      SSTA     STCHL     STCHR     ENDST    STENCR    TOPWID     10*KS       EG

   184.000   625.20  1800.00   8296.90   8313.56   9986.50  10015.50  11343.42  11361.20    971.11      7.17    20.41

*  186.000   337.70  1521.00   8204.30   8219.94   9978.70  10055.80  10457.50  11295.90    647.38     20.59    20.78

*  188.000   365.50  1293.00   8275.00   8275.00   9983.10  10016.30  10282.31  11361.10   1063.06       .74    20.85
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50% BLOCKED CONDITIONS 1

SUMMARY PRINTOUT

      SECNO      XLCH         Q       VCH      AREA       VOL     ELMIN     DEPTH     DIFEG        EG    DIFWSP    DIFWSX

    150.000       .00   2270.00      2.59   2178.91       .00     10.90      3.06       .00     13.99       .00       .00

    152.000    455.00   2270.00      2.69   2034.18     25.06     11.60      3.13       .00     14.77       .00       .77

*   154.000    379.70   2270.00       .43   2322.08     43.11     12.10      2.89       .00     15.01       .00       .26

*   156.000     55.30   2270.00       .49   3045.58     46.79     10.30      4.71       .00     15.02       .00       .02

*   158.000    438.90   2270.00      2.94   1401.92     69.02     10.90      4.18       .00     15.15       .00       .07

    160.000    469.10   2270.00      1.14   3003.28     99.70     11.70      4.02       .00     15.73       .00       .64

    162.000    470.60   2270.00      1.22   2819.88    128.55     12.10      4.00       .00     16.11       .00       .37

*   164.000    416.00   2270.00       .92   1659.73    147.85     14.20      2.51       .00     16.75       .00       .62

*   166.000     94.00   2270.00      1.88    625.79    150.31     16.30       .99       .00     17.54       .00       .58

*   168.000     94.30   2270.00       .69   2570.54    153.76     13.80      3.80       .00     17.61       .00       .30

    170.000    534.90   2270.00      1.60   1937.02    182.10     13.80      3.96       .00     17.78       .00       .16

    172.000    602.70   2270.00      1.85   1869.90    239.17     14.40      3.95       .00     18.37       .00       .59

*   174.000    819.00   1938.00      2.67    931.26    270.62     15.30      3.88       .00     19.25       .00       .83

    176.000    466.40   1938.00      1.93   1401.32    279.37     16.70      3.01       .00     19.75       .00       .54

*   178.000     61.00   1916.00       .61   3352.46    293.70     16.60      3.23       .00     19.83       .00       .11

*   180.000     51.90   1862.00      1.17   2234.13    310.41     16.90      2.98       .00     19.89       .00       .06

    182.000    132.70   1862.00      1.78   1482.46    316.49     15.80      4.15       .00     19.98       .00       .07

    184.000    625.20   1800.00      1.79   1314.86    335.66     15.90      4.48       .00     20.41       .00       .43

*   186.000    337.70   1521.00      1.84    759.82    344.16     17.20      3.51       .00     20.78       .00       .33

*   188.000    365.50   1293.00       .14   2317.03    355.20     15.60      5.24       .00     20.85       .00       .14
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*  HEC-2 WATER SURFACE PROFILES              *
*                                            *
*  Version   4.6.2;  May 1991                *
*                                            *
*  RUN DATE    26JUN95    TIME    15:03:08   *
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DECK3

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********************************
*  U.S. ARMY CORPS OF ENGINEERS
*  HYDROLOGIC ENGINEERING CENTE
*  609 SECOND STREET, SUITE D
*  DAVIS, CALIFORNIA 95616-4687
*         (916) 756-1104
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X     X  XXXXXXX   XXXXX              XXXXX
X     X  X        X     X            X     X
X     X  X        X                        X
XXXXXXX  XXXX     X          XXXXX    XXXXX
X     X  X        X                  X
X     X  X        X     X            X
X     X  XXXXXXX   XXXXX             XXXXXXX
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                                                                    THIS RUN EXECUTED 26JUN95    15:03:08
**************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
**************************************


T1      SCHAAF & WHEELER
T2      REVISED NORTH SAN JOSE FLOODPLAIN W/O COYOTE SPILL
T3      50% BLOCKED CONDITIONS - 100-YEAR - DECK 3

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

          4.                                                                        20.84

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

 -1.      0.        -1.                                                                 15.


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

 38.      39.       43.       27.       53.       21.       22.       54.       28.       4.
 5.       3.        1.        38.       39.       43.       26.       25.       7.        42.
 8.       61.       3.        50.       51.

NC   .045      .045      .045
QT   3.        2270.     1293.     1293.
ET             5.1       7.1       7.1       8275.     12000.    8275.     11361.1
        STARTING WSEL FROM DECK 2
X1   188.0     90.       9983.1    10016.3   0.        0.        0.
GR   27.8      8047.8    27.5      8051.8    20.3      8070.3    19.1      8120.5    17.3      8198.2
GR   17.9      8320.2    17.9      8455.3    19.0      8550.1    19.5      8552.9    20.1      8561.5
GR   19.2      8572.9    17.6      8581.8    19.6      8667.2    19.2      8673.9    19.6      8706.9
GR   19.8      8739.4    15.6      8928.1    18.8      9064.7    19.9      9067.0    20.2      9072.8
GR   30.9      9079.8    30.9      9324.2    21.2      9329.1    19.8      9461.4    22.4      9480.4
GR   22.4      9488.5    20.7      9573.8    22.0      9646.7    73.4      9660.6    73.4      9812.3
GR   24.3      9828.1    21.1      9842.5    20.1      9904.0    22.1      9930.0    22.4      9983.1
GR   20.5      9986.4    20.5      10000.0   20.5      10010.6   22.3      10016.3   21.6      10055.5
GR   22.5      10057.6   23.7      10076.3   24.1      10088.5   47.9      10096.8   47.9      10201.6
GR   21.8      10213.6   20.0      10225.7   20.5      10281.2   21.7      10285.1   22.7      10325.1
GR   42.7      10331.9   42.7      10430.3   21.1      10435.8   21.8      10469.2   40.0      10476.3
GR   40.0      10576.1   21.9      10586.7   22.0      10622.8   42.5      10627.6   42.5      10979.8
GR   21.0      10991.2   21.1      11010.2   42.4      11024.0   42.3      11280.3   22.0      11286.3
GR   21.6      11320.0   21.0      11321.6   21.3      11355.7   23.3      11361.6   22.6      11433.8
GR   22.6      11558.7   21.6      11564.9   21.3      11650.5   21.5      11693.3   32.0      11704.0
GR   32.0      11744.4   22.0      11747.0   22.0      11791.5   22.3      11799.8   22.7      11812.2
GR   22.3      11818.5   24.6      11936.5   24.4      11941.8   23.4      11985.0   49.0      11997.5
GR   49.0      12418.7   24.2      12426.5   22.2      12490.5   23.5      12546.1   24.9      12553.3
```

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ET              5.1       7.1       7.1       8400.     12032.7   8400.     11284.1
QT    3.        2270.     1270.     1270.
         NO FLOW DIVISION AT FIRST ST
X1    190.0     95.       9984.2    10013.1   498.9     550.      469.2
GR    22.1      7566.3    23.6      7572.4    50.8      7582.4    50.8      7882.1    22.2      7898.8
GR    20.2      7966.0    20.2      7977.5    21.2      8031.5    22.1      8044.2    40.9      8049.8
GR    40.9      8207.6    22.3      8220.9    22.3      8274.1    50.7      8280.4    50.7      8431.7
GR    21.3      8451.7    21.4      8505.2    21.8      8550.7    21.0      8572.2    21.5      8609.1
GR    21.3      8635.7    21.5      8641.2    21.0      8694.5    22.1      8734.0    22.5      8785.0
GR    76.9      8817.1    76.9      8971.6    24.0      8992.4    24.0      9045.9    62.8      9066.1
GR    62.8      9352.7    22.7      9368.4    23.1      9495.9    50.3      9513.0    50.3      9595.2
GR    26.9      9610.6    26.9      9619.4    26.9      9676.8    34.8      9707.3    34.8      9843.5
GR    22.8      9846.5    21.8      9903.9    24.2      9922.3    22.9      9934.6    23.9      9984.2
GR    22.3      9987.3    22.3      10000.0   22.3      10011.8   24.2      10013.1   23.6      10054.0
GR    23.8      10056.4   25.2      10074.7   25.0      10085.4   22.5      10096.9   22.2      10123.8
GR    22.8      10149.5   23.6      10151.4   24.5      10163.8   55.9      10182.1   55.9      10367.4
GR    22.5      10387.6   21.2      10464.9   20.6      10480.6   21.7      10507.1   42.8      10519.4
GR    42.8      10791.0   21.5      10808.2   20.3      10857.9   23.1      10867.0   22.2      10879.6
GR    23.3      10907.7   24.0      10939.4   60.0      10967.1   60.0      11140.2   25.4      11158.9
GR    24.5      11271.7   25.1      11284.1   23.4      11306.3   22.7      11352.8   23.1      11372.8
GR    42.7      11388.6   42.7      11484.8   22.5      11493.4   22.5      11526.8   41.0      11541.5
GR    41.       11611.7   23.       11618.8   22.7      11722.5   47.6      11743.2   47.6      11802.9
GR    23.3      11809.9   23.7      11895.1   24.4      11915.5   22.7      11979.    23.4      12032.7

ET              5.1       7.1       7.1       8000.     12303.6   8000.     11241.3
         TRIMBLE RD
X1    192.0     95.       9921.3    10067.5   220.      150.      181.2
GR    30.5      6614.2    27.8      6897.2    26.2      7148.2    26.2      7277.1    27.8      7331.9
GR    28.7      7541.1    28.5      7655.8    27.5      7815.1    26.8      8018.7    25.2      8136.4
GR    25.2      8200.9    26.4      8221.9    26.5      8415.8    23.7      8503.4    23.8      8623.7
GR    23.5      8642.9    23.9      8701.6    23.6      8772.5    23.7      8776.4    24.5      8790.9
GR    25.1      8850.     26.9      8851.     26.9      9037.7    26.9      9080.2    26.9      9088.4
GR    26.9      9112.3    26.9      9132.7    27.3      9261.2    27.3      9424.6    26.9      9498.6
GR    26.9      9561.9    27.0      9628.8    26.9      9829.     25.5      9830.     25.6      9888.5
GR    25.3      9921.3    25.7      9964.1    25.8      10000.0   25.2      10053.4   25.0      10067.5
GR    25.7      10075.4   26.3      10120.3   26.6      10217.6   26.2      10282.5   26.0      10356.1
GR    24.4      10369.2   25.0      10400.1   25.7      10410.2   26.0      10493.5   25.9      10656.5
GR    24.4      10675.7   24.6      10711.8   25.2      10720.5   25.6      10911.3   26.8      11003.7
GR    27.0      11053.0   25.5      11091.6   24.5      11173.5   24.1      11180.3   24.8      11237.8
GR    25.1      11241.3   24.2      11293.3   23.1      11317.2   23.5      11532.6   23.8      11766.6
GR    24.4      11811.2   26.2      11846.2   25.2      11860.4   24.0      11879.7   24.0      11902.7
GR    25.2      11910.1   25.2      11960.2   25.3      12037.3   26.2      12141.6   26.1      12249.9
GR    24.3      12263.0   24.3      12284.7   25.2      12293.0   27.1      12303.6   26.4      12336.9
GR    23.7      12347.7   23.7      12370.3   25.0      12377.8   26.5      12407.3   26.8      12689.5
GR    25.4      12700.4   24.5      12702.6   24.2      12714.8   24.4      12764.0   24.8      12766.8
GR    25.1      12772.1   27.1      12788.8   28.2      12956.0   27.9      12999.3   27.0      13014.3

ET              5.1       7.1       7.1       6570.5    12430.    6570.5    11227.6   6570.5    11441.3
X1    194.0     39.0      9910.8    10345.6   78.2      70.       73.4
GR    32.9      6570.5    29.3      6876.6    26.8      7168.4    27.2      7485.0    27.4      7699.3
GR    26.7      7841.0    25.5      8079.1    25.0      8305.7    25.5      8699.8    25.9      8830.
GR    26.9      8831.     26.9      9000.     26.9      9500.     26.9      9800.     26.9      9859.
GR    26.2      9860.     26.2      9910.8    26.2      9930.1    26.4      10000.0   26.4      10054.5
GR   27.2    10345.6   26.8     10539.1   27.0     10731.9   26.8     10895.6   26.1     11100.1
GR   25.7    11227.6   24.6     11441.3   24.3     11803.2   24.7     12144.4   25.4     12477.3
GR   25.7    12693.3   26.0     12799.8   26.6     12962.5   27.5     13100.8   28.3     13248.5
GR   28.6    13304.5   28.3     13410.3   29.3     13586.4   30.3     13677.0

ET           5.1       7.1      7.1       6702.1   12466.8   6702.1   11308.6
X1   196.0   93.       9902.3   10080.8   95.0     47.3      85.8
GR   37.8    6702.1    34.9     6806.6    28.9     6949.9    28.9     6974.0    31.1     7101.7
GR   31.0    7180.4    33.8     7263.1    33.5     7302.3    25.9     7349.0    26.5     7379.0
GR   26.1    7417.3    26.8     7425.3    29.4     7452.1    28.1     7480.3    28.7     7493.3
GR   32.8    7535.6    31.4     7608.8    26.3     7720.5    27.2     7799.1    26.2     8069.5
GR   26.7    8192.5    26.9     8263.9    26.9     8324.1    24.7     8695.1    24.0     8741.4
GR   24.7    8744.4    25.7     8765.1    25.8     8810.     27.3     8811.     27.2     9067.6
GR   27.9    9125.3    27.2     9223.5    27.9     9321.0    28.0     9440.4    29.0     9484.7
GR   27.0    9596.1    28.3     9648.3    26.5     9725.8    26.6     9734.5    28.0     9749.3
GR   27.9    9761.8    27.0     9780.9    29.4     9826.2    30.0     9867.1    26.0     9902.3
GR   25.2    9942.5    26.7     10000.0   25.2     10063.8   25.9     10080.8   27.7     10249.2
GR   28.2    10738.3   28.2     10835.1   28.5     10846.6   29.2     10871.0   28.8     10958.1
GR   27.0    10980.0   27.1     10999.9   28.2     11025.1   27.3     11180.7   25.2     11215.9
GR   24.8    11225.5   24.8     11228.8   25.0     11296.0   25.9     11302.5   25.9     11308.6
GR   24.5    11314.0   25.2     11330.2   24.9     11474.2   24.6     11602.9   24.5     11608.4
GR   24.8    11645.2   24.6     11752.6   25.2     11865.4   25.6     11963.4   25.0     12003.1
GR   24.9    12014.4   23.8     12020.8   24.9     12037.2   24.8     12090.4   24.7     12096.3
GR   24.8    12161.5   25.0     12165.5   26.0     12181.4   28.2     12251.9   27.9     12318.9
GR   26.3    12324.3   25.8     12347.1   27.3     12364.8   26.9     12380.6   24.4     12397.9
GR   25.     12435.    25.8     12441.7   28.5     12466.8

ET           5.1       7.1      7.1       6385.6   12831.5   6385.6   11363.2
NH   3.      .045      8197.5   .09       8701.4   .045      12795.7
X1   198.0   88.       9988.4   10014.0   420.     180.      213.0
GR   31.7    6385.6    26.2     6402.0    25.7     6582.7    25.3     6584.1    25.3     6611.2
GR   30.6    6663.     31.2     6788.1    25.0     6825.3    26.0     6936.1    26.6     6940.4
GR   27.7    6976.6    27.3     7039.3    26.5     7152.1    27.6     7278.6    71.      7867.3
GR   25.1    7877.6    24.      7909.5    24.3     7937.9    27.6     7972.2    29.      8025.4
GR   24.0    8085.6    24.3     8152.0    23.1     8197.5    23.8     8343.8    23.9     8552.1
GR   25.2    8574.5    25.3     8606.3    26.2     8613.8    26.0     8689.2    26.9     8701.4
GR   27.     8735.     27.5     9252.5    28.      9779.9    28.5     9903.1    28.7     9925.2
GR   25.7    9938.3    27.1     9988.4    25.0     9991.1    25.0     10013.2   27.0     10014.
GR   25.7    10088.9   24.7     10146.6   26.2     10265.9   26.7     10267.6   27.9     10298.4
GR   74.5    10302.4   74.5     10532.8   26.0     10550.4   25.8     10793.4   24.4     10810.9
GR   24.4    10840.7   26.3     10903.9   53.5     10909.6   53.5     11177.8   25.7     11193.1
GR   25.1    11267.4   25.9     11273.4   27.5     11284.2   27.4     11291.1   24.1     11303.2
GR   25.2    11344.9   27.0     11351.9   27.3     11363.2   25.1     11372.2   24.0     11410.7
GR   26.0    11420.8   26.5     11435.9   25.7     11438.2   25.7     11448.0   26.3     11487.3
GR   49.4    11500.9   49.4     11646.0   26.4     11655.6   24.4     11735.2   24.1     11763.1
GR   24.1    11826.8   56.4     11845.1   56.4     12046.1   25.1     12061.4   23.1     12203.4
GR   53.7    12215.2   52.6     12662.9   23.8     12671.    23.8     12704.4   24.2     12723.3
GR   25.8    12785.9   25.3     12795.7   26.      12831.5
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ET              5.1       5.1       5.1       6669.     12850.7
NH    2.        .09       8657.3    .045      13487.
QT    3.        2270.     2270.     2270.
X1    200.0     95.       9988.9    10016.1   500.      300.      386.3
GR    27.8      6669.0    26.6      6673.8    23.9      6748.9    24.0      6941.4    27.8      7015.2
GR    32.4      7284.9    26.9      7351.2    24.9      7868.7    24.9      8316.4    24.7      8495.0
GR    24.8      8644.9    27.3      8657.3    27.1      8842.1    26.5      8910.7    26.1      8951.1
GR    27.3      9047.5    27.5      9051.7    27.5      9059.3    73.6      9263.2    73.0      9630.8
GR    26.8      9634.4    25.2      9726.3    26.1      9877.2    26.7      9878.2    27.8      9894.6
GR    30.3      9903.5    29.8      9909.8    26.9      9921.4    27.9      9988.9    26.5      9991.4
GR    26.5      10000.0   26.5      10014.2   27.3      10016.1   26.6      10073.9   24.4      10094.3
GR    26.3      10256.8   27.7      10259.5   28.3      10272.5   75.1      10280.1   75.1      10398.9
GR    28.9      10415.8   28.9      10426.8   26.8      10435.3   27.6      10547.4   100.8     10685.2
GR    26.6      10708.    25.6      10893.    26.2      11026.7   54.1      11035.5   54.1      11301.8
GR    25.5      11317.7   24.4      11393.8   26.6      11404.4   26.6      11409.5   24.1      11425.7
GR    25.2      11459.3   24.8      11490.0   24.4      11511.7   29.1      11533.9   56.3      11791.2
GR    25.5      11798.1   24.5      11872.9   24.0      11902.5   54.6      11917.5   54.6      12118.1
GR    25.0      12123.0   23.0      12261.2   54.1      12271.8   54.1      12497.0   22.8      12498.3
GR    22.8      12539.3   53.1      12548.1   53.1      12726.    23.5      12734.8   24.2      12778.6
GR    25.1      12831.    28.       12838.6   28.7      12850.7   26.8      12858.7   27.1      12916.9
GR    28.9      12922.7   29.2      12931.6   26.7      12941.8   24.8      13056.6   55.       13067.9
GR    55.       13193.5   23.6      13203.4   23.6      13233.5   25.2      13243.4   25.5      13285.9
GR    62.2      13291.3   62.2      13449.7   26.2      13463.3   25.       13487.    25.9      13558.1

ET              5.1       5.1       5.1       6817.6    13600.    6817.6    9985.
NH    2.        .09       8128.4    .045      13559.
X1    202.0     95.       9985.0    10012.6   460.      500.      425.8
GR    34.2      6809.8    34.1      6817.6    27.3      6841.1    25.6      6955.6    24.5      7183.0
GR    25.2      7360.1    25.6      8128.4    25.7      8505.6    25.8      8832.7    25.8      9031.3
GR    27.7      9051.2    27.3      9156.7    27.6      9159.1    27.5      9235.5    28.5      9330.2
GR    32.8      9365.8    31.3      9466.3    25.1      9530.0    25.1      9671.1    23.7      9775.8
GR    25.4      9887.2    25.5      9889.3    26.0      9898.0    30.9      9911.2    28.7      9920.8
GR    28.1      9931.5    29.0      9985.0    27.4      9988.0    27.4      10000.0   27.4      10010.8
GR    28.1      10012.6   28.1      10067.0   24.3      10090.9   26.5      10262.4   26.2      10289.2
GR    27.0      10323.3   28.9      10325.0   29.3      10335.9   87.2      10341.9   87.2      10514.7
GR    26.8      10536.2   26.6      10613.2   25.6      10677.6   26.2      10724.8   25.9      10773.6
GR    24.3      10804.6   53.8      10811.6   53.8      11033.0   26.0      11049.5   26.4      11133.8
GR    44.4      11143.1   44.4      11395.9   25.4      11408.6   25.2      11467.5   28.1      11477.1
GR    27.7      11481.7   26.1      11489.2   25.3      11497.9   26.7      11530.9   28.6      11536.2
GR    28.4      11544.1   26.0      11546.8   25.2      11583.5   26.8      11591.8   29.5      11614.5
GR    50.1      11625.3   50.1      11776.9   26.7      11783.4   25.5      11839.6   25.8      11881.8
GR    56.6      11897.0   56.6      12053.9   27.3      12060.8   25.8      12114.3   25.8      12138.5
GR    27.1      12179.5   27.2      12233.6   26.5      12242.3   28.1      12252.1   27.1      12378.6
GR    52.5      12385.0   52.5      12777.3   28.4      12791.5   28.0      12805.7   27.3      12904.0
GR    27.7      12930.7   27.2      12966.8   28.1      12973.6   29.1      12982.2   28.3      12992.8
GR    28.4      13039.8   57.1      13047.6   57.1      13546.7   31.2      13559.0   30.1      13600.3

ET              5.1       5.1       9.1       6932.3    11900.0   6932.3    9975.7    6923.3    11703.0
NH    2.        .09       9973.7    .045      12238.1
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X1   204.0    95.0      9986.6    10012.7   554.8     350.      484.0
GR   36.0     6923.3    36.0      6932.3    28.1      6965.0    26.6      8121.5    26.6      8623.1
GR   26.6     9430.4    28.0      9940.8    28.6      9973.7    30.1      9975.7    29.8      9986.6
GR   28.2     9988.3    27.7      10000.0   27.7      10010.1   28.2      10012.7   28.5      10064.4
GR   32.6     10075.2   32.4      10081.3   28.9      10092.9   28.6      10119.7   29.6      10150.7
GR   30.3     10153.1   31.0      10179.7   72.0      10187.9   72.0      10364.6   30.6      10375.2
GR   31.1     10436.9   71.1      10450.4   71.1      10638.9   30.4      10654.0   30.4      10676.4
GR   30.4     10679.3   27.2      10823.2   28.0      10878.9   25.6      10881.8   25.6      10895.7
GR   54.6     10903.6   54.6      11101.8   26.8      11118.1   26.2      11152.4   27.6      11183.2
GR   28.4     11250.0   29.0      11251.6   29.3      11253.8   46.7      11259.2   46.7      11535.2
GR   28.7     11549.6   28.1      11584.7   28.6      11586.8   29.0      11593.7   27.0      11604.4
GR   26.9     11609.3   26.8      11612.6   27.6      11644.7   27.6      11652.8   27.0      11696.7
GR   27.3     11711.1   27.7      11780.9   28.7      11785.9   55.7      11798.6   55.7      12238.1
GR   25.2     12243.9   25.9      12259.5   27.8      12265.6   27.5      12325.0   28.7      12334.2
GR   28.5     12347.7   27.6      12355.0   27.1      12496.1   28.1      12548.9   29.7      12634.2
GR   57.0     12642.9   57.0      12835.3   28.4      12842.0   27.9      12851.9   28.7      12957.3
GR   29.6     12962.4   31.7      12971.2   31.2      12984.4   28.5      13000.0   28.6      13060.1
GR   29.7     13064.9   30.6      13074.4   28.6      13081.0   28.9      13104.1   57.8      13112.4
GR   57.8     13837.7   31.9      13854.0   31.9      13881.6   33.7      13903.6   34.6      13959.8
GR   65.6     13965.5   65.6      14340.7   35.0      14359.7   35.0      14426.2   36.1      14448.0

ET            5.1       5.1       9.1       6910.2    12000.    6910.2    9985.5    6902.4    10400.0
NH   2.       .09       9954.1    .045      12294.4
X1   206.0    95.       9985.5    10015.6   664.6     750.      704.3
GR   36.2     6902.4    36.2      6910.2    30.3      6938.5    30.1      7563.9    30.1      7821.9
GR   29.4     7841.0    28.1      8404.1    28.1      8680.6    28.5      9310.9    29.8      9748.9
GR   29.2     9954.1    29.7      9985.5    28.6      9988.1    28.5      10000.0   28.5      10012.3
GR   29.5     10015.6   29.4      10060.4   29.7      10061.7   30.7      10074.0   31.7      10080.6
GR   30.9     10100.7   31.8      10151.8   32.3      10153.8   32.8      10166.5   70.9      10175.8
GR   70.9     10416.8   31.5      10431.0   30.1      10540.3   30.1      10551.8   30.9      10604.0
GR   31.1     10607.0   31.1      10618.4   29.5      10630.2   29.7      10645.6   31.8      10687.0
GR   47.0     10692.6   47.0      11051.4   30.5      11063.4   30.5      11088.7   30.5      11098.3
GR   31.0     11111.2   47.3      11119.1   47.3      11337.5   31.4      11348.1   31.1      11383.2
GR   47.6     11398.1   47.6      11559.3   32.6      11560.6   31.0      11578.8   30.2      11634.6
GR   32.3     11643.6   33.2      11652.1   30.0      11667.3   29.2      11673.1   30.1      11705.8
GR   30.9     11708.5   30.7      11721.1   30.1      11723.5   29.8      11758.3   31.2      11765.6
GR   31.1     11783.2   27.8      11799.9   29.4      11863.8   31.9      11916.2   59.0      11931.2
GR   59.0     12294.4   29.5      12301.8   29.5      12344.9   31.0      12350.0   30.3      12392.3
GR   29.8     12399.2   30.3      12474.8   31.0      12478.1   30.2      12522.5   30.8      12634.7
GR   54.0     12647.2   54.0      12985.9   30.5      12995.9   30.5      13008.9   29.8      13059.5
GR   31.2     13066.3   32.1      13079.6   29.7      13093.2   30.6      13120.1   30.2      13152.4
GR   31.0     13157.3   33.0      13171.2   34.7      13184.8   34.7      13198.1   31.6      13217.1
GR   31.9     13277.3   32.3      13281.4   33.8      13295.0   35.1      13305.0   58.4      13307.7

ET            5.1       5.1       9.1       7193.7    13301.4   7193.7    9986.5    7187.1    9930.0
NH   2.       .09       9986.5    .045      13301.4
X1   208.0    95.       9986.5    10014.2   231.5     384.5     300.0
GR   35.5     7187.1    35.5      7193.7    30.2      7543.1    30.0      7915.4    28.9      8474.6
GR   28.7     8678.7    28.9      9295.7    29.4      9607.1    30.1      9937.4    31.2      9986.5
GR   29.3     9989.0    29.3      10000.0   29.4      10012.1   30.8      10014.2   30.8      10058.2
GR   31.0     10060.1   31.2      10066.6   32.3      10077.7   32.2      10086.1   30.5      10098.8
GR   31.0     10197.5   31.9      10264.0   31.7      10267.9   32.6      10306.3   33.0      10326.2
GR   71.4     10338.7   71.4      10520.5   31.3      10537.8   30.7      10595.4   31.4      10645.1
GR   31.4     10660.6   30.1      10672.6   32.0      10731.7   47.8      10741.4   47.8      10880.3
GR   33.0     10887.9   30.6     10898.9   30.0     10953.8   32.8     10964.1   32.6     10980.1
GR   31.6     10993.4   31.3     11030.0   31.9     11032.1   32.4     11042.3   34.8     11050.5
GR   34.7     11062.7   48.0     11068.4   48.0     11326.8   32.2     11337.6   32.8     11393.0
GR   48.6     11404.6   48.6     11663.8   34.4     11668.4   34.3     11682.5   30.8     11709.4
GR   31.8     11749.8   31.0     11793.8   32.5     11803.8   32.7     11813.3   32.4     11817.6
GR   30.4     11824.0   31.4     11859.5   51.4     11870.6   51.4     12001.2   31.7     12006.1
GR   31.4     12110.8   63.6     12124.2   63.6     12351.2   32.3     12362.8   32.3     12375.6
GR   33.9     12386.3   33.2     12421.0   34.3     12431.7   32.9     12673.0   34.2     12764.1
GR   34.1     12833.7   33.7     12907.1   33.7     12914.1   34.3     12936.5   35.0     12939.7
GR   35.2     12980.2   50.8     12987.3   50.8     13090.7   34.3     13094.5   34.3     13097.8
GR   33.9     13101.0   33.7     13131.5   32.4     13152.2   32.3     13213.9   35.0     13225.8
GR   36.6     13233.3   36.3     13237.5   34.1     13249.1   33.8     13299.4   34.6     13301.4

ET            5.1       5.1      9.1       7390.6   10900.    7390.6   9985.9    7377.9   9970.0
NH   2.       .09       9951.4   .045      10955.2
X1   210.0    95.       9985.9   10014.1   202.8    250.      174.8
GR   38.6     7377.9    38.8     7390.6    29.9     7416.0    30.1     7940.2    29.5     8462.4
GR   29.3     8530.1    28.7     8985.4    30.1     9658.5    30.7     9908.5    31.3     9917.6
GR   30.5     9948.2    30.1     9951.4    31.0     9985.9    29.3     9989.1    29.3     10000.0
GR   29.4     10011.5   30.5     10014.1   30.1     10057.6   30.6     10060.6   31.1     10072.8
GR   32.2     10076.7   31.5     10094.4   31.9     10161.5   31.3     10291.8   32.1     10328.9
GR   33.1     10349.1   71.9     10366.6   71.9     10572.4   31.8     10593.8   30.7     10643.3
GR   31.5     10713.1   31.5     10720.0   30.2     10747.2   31.4     10779.3   32.6     10805.2
GR   47.9     10809.8   47.9     10955.2   32.6     10967.2   30.7     10978.8   30.8     11031.4
GR   32.4     11042.7   33.7     11050.6   31.3     11070.1   31.2     11078.1   30.9     11115.7
GR   31.6     11122.3   35.3     11134.3   35.8     11141.0   36.3     11146.7   49.3     11149.5
GR   49.3     11411.9   32.8     11425.0   33.2     11487.5   49.4     11497.4   49.4     11758.8
GR   33.7     11765.6   31.5     11802.3   32.7     11842.5   34.8     11847.5   35.2     11854.1
GR   35.0     11859.9   33.7     11862.8   32.8     11907.5   31.5     11938.2   31.5     11959.7
GR   51.7     11972.6   51.7     12101.5   31.8     12108.2   30.7     12213.4   62.8     12231.8
GR   62.8     12461.0   36.2     12472.8   36.2     12518.2   35.1     12533.6   35.4     12573.4
GR   35.9     12576.1   36.8     12602.0   55.9     12613.6   55.9     12827.6   37.3     12831.7
GR   37.0     12849.2   35.3     12864.5   37.6     12944.0   58.3     12953.9   58.3     13252.4
GR   34.5     13263.9   34.5     13323.2   36.3     13332.8   37.9     13342.4   34.2     13360.8
GR   34.4     13394.6   33.5     13419.5   39.5     13443.2   38.8     13452.3   38.2     13510.0

ET            5.1       5.1      9.1       7618.7   13803.2   7618.7   10000.    7618.7   9670.0
NH   2.       .09       9974.9   .045      13803.2
       CHARCOT AVE
X1   212.0    95.       9937.1   10080.0   70.      80.       68.9
GR   28.6     7618.7    30.6     8172.1    29.2     8526.9    28.6     8899.7    29.      9245.6
GR   29.8     9420.6    30.3     9935.0    30.2     9937.1    31.2     9974.9    31.5     10000.0
GR   30.3     10071.1   30.9     10080.0   33.9     10100.7   34.0     10195.3   32.2     10415.8
GR   31.9     10425.2   31.9     10448.9   34.2     10455.3   33.9     10629.7   31.3     10643.2
GR   31.4     10666.2   33.2     10679.3   33.6     10695.9   32.2     10715.4   32.2     10734.8
GR   31.1     10741.0   31.3     10764.1   33.2     10779.8   34.9     10800.2   36.7     10842.6
GR   35.2     10915.5   31.9     10944.1   32.0     10970.0   33.7     10978.5   34.3     10994.8
GR   35.9     11006.4   35.5     11016.1   31.9     11035.2   31.3     11045.6   31.6     11101.9
GR   33.8     11111.8   35.3     11128.0   35.1     11178.0   32.6     11190.8   32.6     11216.4
GR   34.3     11221.3   35.0     11293.9   35.0     11346.3   33.3     11465.0   32.8     11816.4
GR   33.3     11844.2   31.8     11880.4   32.6     11889.9   35.1     11947.1   35.9     12063.9
GR   34.2     12136.2   33.2     12146.4   33.4     12182.5   35.3     12223.8   38.3     12466.9
GR   37.3     12475.9   37.7     12496.7   38.7     12502.0   38.1     12581.3   39.6     12597.9
GR   39.8     12717.3   39.3     12777.8   36.7     12794.4   36.9     12816.7   37.8     12822.3
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DECK 2 - SF

```
*********************************************
*  HEC-2 WATER SURFACE PROFILES             *
*                                           *
*  Version   4.6.2;  May 1991               *
*                                           *
*  RUN DATE    25MAY95    TIME   15:59:58   *
*********************************************
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********************************
*  U.S. ARMY CORPS OF ENGINEERS
*  HYDROLOGIC ENGINEERING CENTE
*  609 SECOND STREET, SUITE D
*  DAVIS, CALIFORNIA 95616-4687
*          (916) 756-1104
********************************
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X     X XXXXXXX   XXXXX             XXXXX
X     X X        X     X           X     X
X     X X        X                       X
XXXXXXX XXXX     X         XXXXX    XXXXX
X     X X        X                 X
X     X X        X     X           X
X     X XXXXXXX   XXXXX            XXXXXXX
```

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                                                          THIS RUN EXECUTED 25MAY95    15:59:58
*************************************
 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
*************************************



SPLIT FLOW BEING PERFORMED


SF      SPLIT FLOW IN VICINITY OF TRIMBLE ROAD EAST OF ZANKER


TW      SEC 192  TO 190
WS2.    190.     192.     -1.      2.6
WCO.    25.1     150.     25.1

TW      SEC 190  TO 188
WS2.    188.     190.     -1.      2.6
WCO.    23.3     600.     25.1

TW      SEC 188  TO 186
WS2.    186.     188.     -1.      2.6
WCO.    22.8     600.     23.3

TW      SEC 186  TO 184
WS2.    184.     186.     -1.      2.6
WCO.    22.4     450.     22.8

TW      SEC 184  TO 182
WS2.    182.     184.     -1.      2.6
WCO.    23.2     350.     22.4

TW      SEC 182  TO 180
WS2.    180.     182.     -1.      2.6
WCO.    23.6     350.     23.2

TW      SEC 180  TO 178
WS2.    178.     180.     -1.      2.6
WCO.    21.5     100.     23.6

TW      SEC 178  TO 176
WS2.    176.     178.     -1.      2.6
WCO.    23.3     50.      21.5

TW      SEC 176  TO 174
WS2.    174.     176.     -1.      2.6
WCO.    22.1     400.     23.3
```

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T1      SCHAAF & WHEELER
T2      REVISED NORTH SAN JOSE FLOODPLAIN W/O COYOTE SPILL
T3      50% BLOCKED CONDITIONS 100-YEAR - DECK 2

J1  ICHECK    INQ       NINV      IDIR      STRT      METRIC    HVINS     Q         WSEL      FQ

          3.                                                                     18.35

J2  NPROF     IPLOT     PRFVS     XSECV     XSECH     FN        ALLDC     IBW       CHNIM     ITRACE

 -1.     0.        -1.                                                                    15.


J3  VARIABLE CODES FOR SUMMARY PRINTOUT

 38.      39.       43.       27.       53.       21.       22.       54.       28.       4.
 5.       3.        1.        38.       39.       43.       26.       25.       7.        42.
 8.       61.       3.        50.       51.

ET            5.1       7.1                 8750.     11320.    11320.    12309.
NH  3.        .045      8833.9    .09       9301.3    .045      11866.6
QT  2.        2270.     60.
       STARTING WSEL FROM MAIN DECK
X1  172.0     90.       9986.2    10015.8   665.7     3266.9    602.7
GR  26.2      8348.7    25.9      8354.5    19.3      8374.3    18.8      8386.1    19.4      8435.5
GR  36.0      8444.4    36.0      8621.9    22.7      8629.2    17.4      8674.5    17.3      8682.6
GR  16.8      8685.0    16.0      8740.0    17.9      8748.6    17.8      8773.4    16.5      8776.7
GR  16.5      8833.9    16.9      8844.9    18.0      8881.7    17.6      9186.8    15.8      9201.1
GR  14.4      9301.3    16.1      9434.5    43.7      9444.0    43.8      9832.8    17.8      9837.7
GR  17.1      9849.4    15.7      9851.5    14.8      9909.3    16.6      9913.6    15.7      9944.9
GR  15.7      9986.2    14.4      9991.4    14.5      10000.0   14.8      10013.6   16.2      10015.8
GR  15.9      10056.7   17.0      10068.5   18.1      10073.6   17.9      10089.9   16.1      10096.5
GR  18.6      10151.9   21.2      10174.3   35.6      10175.7   35.6      10324.5   19.3      10334.7
GR  18.4      10381.4   19.4      10438.5   37.5      10439.6   37.4      10681.1   18.8      10689.3
GR  18.8      10742.0   37.8      10750.5   37.8      10984.0   18.9      10993.3   19.6      11048.4
GR  37.1      11051.4   37.1      11178.7   17.9      11191.4   17.5      11245.8   19.5      11255.9
GR  19.2      11275.0   16.7      11284.4   17.3      11317.7   18.2      11318.9   17.7      11332.6
GR  17.2      11334.4   17.2      11368.0   19.0      11379.4   19.0      11387.4   20.2      11401.8
GR  20.2      11411.3   41.9      11421.7   41.9      11684.6   19.7      11688.6   17.9      11744.0
GR  18.1      11746.3   18.8      11764.7   18.1      11767.0   18.9      11866.6   19.6      11867.4
GR  20.0      11902.4   21.1      11910.3   21.1      11919.3   19.2      11942.1   19.4      12196.9
GR  19.6      12273.9   21.4      12284.9   21.3      12292.3   19.4      12299.4   19.3      12309.5

ET            5.1       7.1                 8062.2    11327.5   11327.5   11450.0
NC  .045      .045      .045
QT  2.        2270.     1000.
X1  174.      96.       9985.3    10015.9   854.      1299.     819.
GR  27.5      8054.3    27.4      8062.2    22.0      8075.8    21.2      8090.8    21.4      8136.0
GR  51.7      8158.3    51.7      8365.3    22.3      8373.5    20.2      8413.6    20.0      8468.2
GR  22.4      8475.8    22.1      8479.7    19.1      8487.1    18.6      8506.5    19.0      8540.8
GR  18.6      8561.9    19.3      8565.0    20.1      8584.6    19.1      8598.8    19.2      8655.3
GR   21.5     8701.3    56.7     8724.2    56.7     8892.3    20.5     8903.4    20.5     8943.5
GR   51.8     8956.1    51.8     9139.7    20.3     9147.7    21.3     9327.0    39.3     9337.9
GR   39.3     9510.4    20.2     9513.0    20.0     9537.9    20.7     9565.4    41.0     9572.0
GR   41.0     9819.8    20.4     9826.8    16.8     9842.5    15.3     9905.1    19.3     9918.4
GR   19.7     9926.9    18.7     9938.5    17.5     9947.7    17.9     9985.3    16.3     9988.3
GR   16.3     10000.0   16.1     10013.4   17.6     10015.9   17.6     10056.9   18.3     10071.0
GR   20.4     10079.6   19.9     10085.4   17.4     10095.2   18.3     10150.5   20.4     10165.8
GR   36.8     10168.7   36.8     10330.2   20.3     10333.9   20.3     10394.2   37.2     10397.6
GR   36.9     10758.7   19.5     10765.9   16.0     10872.9   16.2     10886.5   20.0     10977.5
GR   20.7     10989.8   36.5     10999.1   36.5     11139.8   20.9     11148.2   18.6     11172.7
GR   18.2     11230.2   21.2     11239.2   21.5     11260.5   19.3     11268.6   19.9     11304.4
GR   21.5     11313.5   22.1     11327.5   19.9     11341.2   19.5     11374.4   20.2     11376.8
GR   20.8     11387.7   22.7     11396.2   22.6     11408.5   19.2     11420.5   19.6     11474.3
GR   20.7     11486.9   53.1     11498.7   53.1     11619.5   21.8     11626.6   20.7     11678.6
GR   55.4     11692.7   55.4     11827.7   21.0     11839.5   21.0     11853.5   19.0     12000.
GR   22.0     12400.

ET            5.1       7.1                8450.    11244.8   11244.8  11700.
NC   .045     .045      .045
X1   176.0    90.       9930.3   10066.7   338.8    235.1     466.4
GR   28.0     8195.6    28.0     8201.5    20.6     8216.9    19.3     8233.2    19.5     8567.3
GR   17.9     8620.5    19.3     8625.8    18.9     8656.8    18.6     8658.9    19.1     8683.2
GR   18.4     8717.1    20.8     8743.1    21.8     8780.4    19.6     8827.4    20.0     8868.1
GR   22.3     8886.7    21.9     8912.3    19.5     8921.9    19.4     8958.8    20.7     8964.0
GR   20.7     8983.6    19.5     8997.9    19.0     9256.5    19.3     9267.6    19.6     9331.9
GR   19.4     9341.8    18.8     9498.9    18.5     9576.0    18.5     9585.3    19.7     9592.4
GR   19.4     9608.2    18.8     9707.7    17.5     9930.3    17.9     9967.0    18.4     10000.0
GR   17.5     10027.9   16.7     10066.7   17.7     10071.8   18.8     10121.4   20.0     10193.3
GR   20.6     10321.4   20.1     10348.0   17.6     10360.2   17.8     10388.6   19.9     10405.6
GR   20.5     10572.8   21.1     10712.4   21.7     10942.6   20.3     10951.4   19.9     10956.8
GR   23.3     11244.8   22.7     11258.7   20.9     11284.6   21.1     11333.5   20.5     11379.4
GR   20.8     11388.9   23.2     11414.6   22.4     11523.4   21.4     11595.5   22.4     11639.4
GR   20.8     11712.8   20.7     11742.3   21.4     11752.9   23.1     11846.1   22.9     11919.1
GR   21.4     12074.7   21.1     12109.4   21.6     12124.3   22.2     12177.6   22.8     12266.6
GR   22.7     12427.7   23.3     12444.9   23.2     12459.0   22.1     12482.8   22.4     12510.3
GR   22.0     12531.8   22.8     12542.4   23.8     12555.2   25.0     12841.1   24.1     12856.4
GR   23.8     12885.1   25.4     12921.8   26.0     12971.9   24.4     13000.4   25.3     13076.3
GR   23.5     13154.8   23.2     13168.0   23.8     13172.3   24.7     13252.7   26.4     13292.3

ET            5.1       7.1                8209.    11323.    11323.   11720.
NH   4.       .09       8670.2   .045      11323.   .09       11762.9  .045      14173.3
X1   178.0    40.0      9598.7   10068.5   220.0    432.0     61.0
GR   27.9     8202.6    27.8     8209.0    21.5     8227.5    21.0     8643.3    18.6     8670.2
GR   18.8     8787.7    19.2     8994.1    18.9     9319.9    18.6     9598.7    17.5     9932.3
GR   18.8     10000.0   17.5     10021.3   16.6     10068.5   17.5     10346.0   18.1     10558.7
GR   18.8     10706.1   19.2     10939.1   21.4     11242.7   21.5     11323.0   20.3     11390.0
GR   21.0     11762.9   21.0     11933.2   21.3     12077.7   21.0     12147.2   20.9     12251.0
GR   21.6     12457.9   22.0     12496.4   21.9     12524.3   22.9     12693.6   24.5     12967.8
GR   24.5     13019.2   25.4     13064.7   24.4     13175.3   24.3     13221.6   25.7     13370.0
GR   27.4     13525.6   29.0     13738.9   29.5     13966.5   29.7     14046.1   29.3     14173.3
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ET            5.1       7.1                 8260.6    11149.6   11149.6   11780.
NH    3.      .045      11264.4   .09       11742.2   .045      14225.7
X1    180.0   80.0      9921.9    10079.0   237.1     393.5     51.9
GR    28.2    8255.8    28.2      8260.6    20.8      8278.0    19.6      8691.3    18.8      8707.9
GR    19.6    8738.3    19.5      8746.9    18.6      8822.6    19.2      9019.1    18.7      9219.8
GR    19.1    9318.5    18.4      9472.1    18.8      9499.2    19.9      9534.3    19.8      9588.3
GR    18.8    9666.0    18.7      9744.0    17.4      9921.9    17.8      9952.7    18.6      10000.0
GR    16.9    10067.1   17.5      10079.0   18.2      10081.1   19.0      10168.2   21.3      10229.0
GR    19.6    10276.8   18.0      10339.8   18.2      10424.4   19.7      10467.3   19.4      10642.6
GR    18.8    10647.9   19.0      10676.0   19.0      10682.9   19.7      10967.5   23.6      11149.6
GR    20.8    11264.4   21.5      11364.8   22.5      11570.3   22.5      11742.2   23.1      11778.3
GR    21.4    11784.6   21.5      11982.8   22.5      12024.6   22.5      12119.2   21.4      12129.1
GR    21.7    12153.9   22.0      12204.9   23.8      12309.7   22.9      12411.6   23.7      12428.9
GR    23.5    12462.6   21.7      12480.0   21.8      12541.7   24.6      12565.8   24.9      12640.4
GR    24.2    12692.0   23.2      12801.1   23.5      12830.7   24.4      12881.6   24.0      12946.0
GR    24.0    12993.7   25.7      13056.0   24.3      13145.2   24.9      13151.2   25.3      13163.4
GR    24.5    13200.9   24.3      13263.2   25.7      13328.8   26.9      13373.3   28.6      13448.7
GR    26.5    13511.8   27.9      13660.2   28.9      13724.9   30.4      13824.7   31.3      13858.5
GR    29.8    13967.6   29.3      14023.6   29.6      14077.7   29.7      14133.4   29.7      14225.7

ET            5.1       7.1                 8280.9    11264.8   11264.8   11900.
NH    3.      .045      11275.6   .09       11760.    .045      13000.
X1    182.0   94.       9976.1    10052.4   184.6     25.9      132.7
GR    28.1    8275.5    28.0      8280.9    21.0      8296.7    20.0      8316.5    19.2      8470.5
GR    18.9    8547.5    19.9      8638.6    20.8      8644.2    21.1      8655.1    18.8      8662.8
GR    19.5    8702.2    21.2      8704.6    21.5      8710.0    21.1      8723.8    18.7      8734.5
GR    19.4    8768.9    18.8      8792.1    19.0      8796.8    19.8      8820.3    18.0      8829.2
GR    18.0    8875.4    19.8      8880.0    20.0      8908.9    30.4      8915.6    31.0      9081.5
GR    19.6    9086.0    16.7      9124.9    16.8      9157.0    30.6      9169.0    30.6      9360.3
GR    19.0    9362.4    17.3      9417.4    18.0      9419.1    17.6      9440.3    17.5      9441.8
GR    17.8    9497.9    18.2      9506.2    20.5      9563.1    42.3      9576.4    42.3      9828.6
GR    18.2    9835.9    17.8      9903.3    18.7      9906.5    20.6      9915.8    20.5      9936.0
GR    18.3    9944.7    18.6      9976.1    15.9      9981.2    15.8      10000.0   18.0      10013.5
GR    17.3    10052.4   17.6      10054.6   18.9      10068.7   20.5      10076.9   19.7      10085.6
GR    18.1    10090.8   20.4      10155.6   45.1      10157.3   45.1      10576.2   19.7      10586.5
GR    18.7    10648.3   19.6      10650.0   19.4      10673.1   18.8      10674.7   20.6      10735.9
GR    39.5    10751.2   39.5      11159.1   21.0      11169.2   21.0      11178.5   20.3      11181.4
GR    19.9    11238.1   23.1      11248.8   23.2      11264.8   21.9      11275.6   22.2      11322.3
GR    22.7    11324.5   22.4      11336.5   21.5      11344.0   21.2      11755.1   23.3      11760.0
GR    23.1    11777.4   21.2      11784.3   21.0      11797.5   20.8      11856.2   20.8      11875.9
GR    21.6    11923.3   21.7      11947.1   21.1      11996.9   21.6      12018.1   22.2      12019.7
GR    23.1    12055.1   58.6      12068.1   21.6      12400.    27.1      13000.

ET            5.1       7.1                 8296.9    11361.2   11361.2   12160.
NH    3.      .045      11351.2   .09       11962.6   .045      13100.
X1    184.0   93.       9986.5    10015.5   638.2     354.4     625.2
GR    27.9    8292.5    27.9      8296.9    19.1      8316.4    19.1      8330.2    19.0      8332.6
GR    20.8    8394.3    42.5      8406.5    42.5      8707.0    20.5      8714.1    19.3      8749.2
GR    19.2    8754.4    19.1      8757.4    18.7      8797.1    19.4      8798.4    20.7      8804.2
GR    20.1    8825.8    18.6      8830.1    18.7      8886.6    19.8      8888.8    22.1      8904.0
GR    23.2    8919.7    30.6      8927.3    30.6      9091.3    20.1      9092.2    20.1      9151.1
GR    37.8    9158.1    37.8      9339.1    20.4      9345.9    17.3      9422.7    15.9      9481.5
GR    17.1    9484.8    17.6      9500.7    16.3      9504.9    20.5      9629.2    39.2      9634.8
GR   39.2    9885.6    19.8     9890.8    19.8     9921.0    20.1     9927.8    20.0     9944.6
GR   19.2    9946.5    19.3     9986.5    17.3     9988.5    17.3    10000.0    17.3    10013.5
GR   18.3   10015.5    18.7    10056.7    21.3    10067.6    21.8    10079.8    23.8    10082.8
GR   23.5   10093.7    22.4    10096.6    21.6    10161.3    45.5    10169.1    45.5    10496.4
GR   22.3   10506.1    21.0    10580.9    19.4    10616.6    20.1    10676.1    20.7    10678.2
GR   20.8   10697.0    20.2    10699.1    21.0    10758.8    21.5    10818.3    43.6    10837.7
GR   43.6   11201.9    20.3    11209.1    19.1    11339.6    20.3    11343.1    22.4    11351.2
GR   22.4   11361.2    19.9    11377.1    20.1    11411.5    20.6    11415.0    21.5    11599.3
GR   21.2   11672.4    20.6    11704.0    21.2    11712.2    19.7    11786.9    20.6    11827.7
GR   20.4   11887.9    21.6    11896.9    20.9    11906.0    20.3    11908.4    22.0    11917.1
GR   21.4   11923.9    20.0    11939.7    20.6    11962.6    22.3    12077.5    21.8    12089.2
GR   21.9   12550.     22.3    12800.     26.0    13100.

ET           5.1       7.1               8204.3   11295.9   11295.9   12500.
NH   2.      .045     11338.6    .09     13200.
X1   186.0   84.       9978.7   10055.8   304.0     676.5     337.7
GR   27.5    8199.3    27.2     8204.3    18.6     8225.0    17.6     8240.8    19.6     8298.6
GR   20.2    8299.8    21.0     8357.4    42.8     8371.8    42.8     8652.3    21.7     8660.2
GR   21.7    8674.6    19.5     8686.3    19.5     8691.5    19.2     8692.5    19.0     8734.9
GR   19.8    8736.4    20.2     8742.6    19.7     8763.0    19.0     8767.5    19.3     8825.3
GR   21.7    8837.8    23.0     8842.7    23.1     8852.9    24.2     8857.4    23.7     8871.2
GR   31.3    8879.4    31.3     9093.0    21.3     9095.8    21.3     9115.6    22.6     9125.1
GR   22.3    9137.8    21.0     9142.7    21.0     9152.3    30.8     9157.4    31.1     9348.7
GR   21.3    9350.9    17.2     9480.2    22.2     9500.8    20.6     9941.0    20.3     9945.3
GR   21.2    9978.7    19.7     9983.7    18.7    10000.0    18.7    10016.7    20.5    10055.8
GR   20.9   10058.3    22.3    10090.5    46.4    10098.7    46.4    10205.7    21.0    10213.8
GR   20.0   10232.5    20.5    10274.2    41.5    10279.3    41.3    10377.5    20.6    10383.1
GR   20.0   10435.6    21.3    10476.1    42.7    10482.6    42.7    10662.0    21.9    10669.7
GR   22.5   10712.2    42.1    10722.6    42.1    10951.6    22.2    10958.5    22.0    11002.9
GR   43.2   11017.1    43.2    11292.2    22.8    11295.9    22.8    11318.3    20.0    11338.6
GR   20.9   11377.6    22.3    11475.2    22.9    11538.1    22.8    11596.5    21.1    11687.7
GR   22.1   11749.4    30.9    11755.5    32.1    11790.4    26.4    11792.0    26.3    11846.6
GR   22.1   11889.     22.0    12550.     21.9    12900.     24.8    13200.

ET           5.1       7.1               8275.    11361.1   11361.1   12200.
NC   .045    .045      .045
X1   188.0   90.       9983.1   10016.3   307.6     408.4     365.5
GR   27.8    8047.8    27.5     8051.8    20.3     8070.3    19.1     8120.5    17.3     8198.2
GR   17.9    8320.2    17.9     8455.3    19.0     8550.1    19.5     8552.9    20.1     8561.5
GR   19.2    8572.9    17.6     8581.8    19.6     8667.2    19.2     8673.9    19.6     8706.9
GR   19.8    8739.4    15.6     8928.1    18.8     9064.7    19.9     9067.0    20.2     9072.8
GR   30.9    9079.8    30.9     9324.2    21.2     9329.1    19.8     9461.4    22.4     9480.4
GR   22.4    9488.5    20.7     9573.8    22.0     9646.7    73.4     9660.6    73.4     9812.3
GR   24.3    9828.1    21.1     9842.5    20.1     9904.0    22.1     9930.0    22.4     9983.1
GR   20.5    9986.4    20.5    10000.0    20.5    10010.6    22.3    10016.3    21.6    10055.5
GR   22.5   10057.6    23.7    10076.3    24.1    10088.5    47.9    10096.8    47.9    10201.6
GR   21.8   10213.6    20.0    10225.7    20.5    10281.2    21.7    10285.1    22.7    10325.1
GR   42.7   10331.9    42.7    10430.3    21.1    10435.8    21.8    10469.2    40.0    10476.3
GR   40.0   10576.1    21.9    10586.7    22.0    10622.8    42.5    10627.6    42.5    10979.8
GR   21.0   10991.2    21.1    11010.2    42.4    11024.0    42.3    11280.3    22.0    11286.3
GR   21.6   11320.0    21.0    11321.6    21.3    11355.7    23.3    11361.6    22.6    11433.8
GR   22.6   11558.7    21.6    11564.9    21.3    11650.5    21.5    11693.3    32.0    11704.0
GR   32.0   11744.4    22.0    11747.0    22.0    11791.5    22.3    11799.8    22.7    11812.2
GR   22.3   11818.5    24.6    11936.5    24.4    11941.8    23.4    11985.0    49.0    11997.5
GR   49.0    12418.7   24.2     12426.5    22.2     12490.5    23.5     12546.1    24.9     12553.3

ET           5.1       7.1                 8400.    11284.1    11284.1  12260.
X1   190.0   97.       9984.2   10013.1    498.9    550.       469.2
GR   22.1    7566.3    23.6     7572.4     50.8     7582.4     50.8     7882.1     22.2     7898.8
GR   20.2    7966.0    20.2     7977.5     21.2     8031.5     22.1     8044.2     40.9     8049.8
GR   40.9    8207.6    22.3     8220.9     22.3     8274.1     50.7     8280.4     50.7     8431.7
GR   21.3    8451.7    21.4     8505.2     21.8     8550.7     21.0     8572.2     21.5     8609.1
GR   21.3    8635.7    21.5     8641.2     21.0     8694.5     22.1     8734.0     22.5     8785.0
GR   76.9    8817.1    76.9     8971.6     24.0     8992.4     24.0     9045.9     62.8     9066.1
GR   62.8    9352.7    22.7     9368.4     23.1     9495.9     50.3     9513.0     50.3     9595.2
GR   26.9    9610.6    26.9     9619.4     26.9     9676.8     34.8     9707.3     34.8     9843.5
GR   22.8    9846.5    21.8     9903.9     24.2     9922.3     22.9     9934.6     23.9     9984.2
GR   22.3    9987.3    22.3     10000.0    22.3     10011.8    24.2     10013.1    23.6     10054.0
GR   23.8    10056.4   25.2     10074.7    25.0     10085.4    22.5     10096.9    22.2     10123.8
GR   22.8    10149.5   23.6     10151.4    24.5     10163.8    55.9     10182.1    55.9     10367.4
GR   22.5    10387.6   21.2     10464.9    20.6     10480.6    21.7     10507.1    42.8     10519.4
GR   42.8    10791.0   21.5     10808.2    20.3     10857.9    23.1     10867.0    22.2     10879.6
GR   23.3    10907.7   24.0     10939.4    60.0     10967.1    60.0     11140.2    25.4     11158.9
GR   24.5    11271.7   25.1     11284.1    23.4     11306.3    22.7     11352.8    23.1     11372.8
GR   42.7    11388.6   42.7     11484.8    22.5     11493.4    22.5     11526.8    41.0     11541.5
GR   41.     11611.7   23.      11618.8    22.7     11722.5    47.6     11743.2    47.6     11802.9
GR   23.3    11809.9   23.7     11895.1    24.4     11915.5    22.7     11979.     23.4     12032.7
GR   24.0    12700.    24.8     13300.

ET           5.1       7.1                 8000.    11241.3    11241.3  12270.
        TRIMBLE ROAD
X1   192.0   95.       9921.3   10067.5    220.     150.       181.2
GR   30.5    6614.2    27.8     6897.2     26.2     7148.2     26.2     7277.1     27.8     7331.9
GR   28.7    7541.1    28.5     7655.8     27.5     7815.1     26.8     8018.7     25.2     8136.4
GR   25.2    8200.9    26.4     8221.9     26.5     8415.8     23.7     8503.4     23.8     8623.7
GR   23.5    8642.9    23.9     8701.6     23.6     8772.5     23.7     8776.4     24.5     8790.9
GR   25.1    8850.     26.9     8851.      26.9     9037.7     26.9     9080.2     26.9     9088.4
GR   26.9    9112.3    26.9     9132.7     27.3     9261.2     27.3     9424.6     26.9     9498.6
GR   26.9    9561.9    27.0     9628.8     26.9     9829.      25.5     9830.      25.6     9888.5
GR   25.3    9921.3    25.7     9964.1     25.8     10000.0    25.2     10053.4    25.0     10067.5
GR   25.7    10075.4   26.3     10120.3    26.6     10217.6    26.2     10282.5    26.0     10356.1
GR   24.4    10369.2   25.0     10400.1    25.7     10410.2    26.0     10493.5    25.9     10656.5
GR   24.4    10675.7   24.6     10711.8    25.2     10720.5    25.6     10911.3    26.8     11003.7
GR   27.0    11053.0   25.5     11091.6    24.5     11173.5    24.1     11180.3    24.8     11237.8
GR   25.1    11241.3   24.2     11293.3    23.1     11317.2    23.5     11532.6    23.8     11766.6
GR   24.4    11811.2   26.2     11846.2    25.2     11860.4    24.0     11879.7    24.0     11902.7
GR   25.2    11910.1   25.2     11960.2    25.3     12037.3    26.2     12141.6    26.1     12249.9
GR   24.3    12263.0   24.3     12284.7    25.2     12293.0    27.1     12303.6    26.4     12336.9
GR   23.7    12347.7   23.7     12370.3    25.0     12377.8    26.5     12407.3    26.8     12689.5
GR   25.4    12700.4   24.5     12702.6    24.2     12714.8    24.4     12764.0    24.8     12766.8
GR   25.1    12772.1   27.1     12788.8    28.2     12956.0    27.9     12999.3    27.0     13014.3

ET           5.1       7.1                 6570.5   11227.6    11227.6  12300.
X1   194.0   39.0      9910.8   10345.6    78.2     70.        73.4
GR   32.9    6570.5    29.3     6876.6     26.8     7168.4     27.2     7485.0     27.4     7699.3
GR   26.7    7841.0    25.5     8079.1     25.0     8305.7     25.5     8699.8     25.9     8830.
GR   26.9    8831.     26.9     9000.      26.9     9500.      26.9     9800.      26.9     9859.
GR   26.2    9860.     26.2     9910.8     26.2     9930.1     26.4     10000.0    26.4     10054.5
GR   27.2    10345.6   26.8    10539.1   27.0    10731.9   26.8    10895.6   26.1    11100.1
GR   25.7    11227.6   24.6    11441.3   24.3    11803.2   24.7    12144.4   25.4    12477.3
GR   25.7    12693.3   26.0    12799.8   26.6    12962.5   27.5    13100.8   28.3    13248.5
GR   28.6    13304.5   28.3    13410.3   29.3    13586.4   30.3    13677.0

ET           5.1       7.1               6702.1  11308.6   11308.6 12325.
X1   196.0   93.       9902.3  10080.8   95.0    47.3      85.8
GR   37.8    6702.1    34.9    6806.6    28.9    6949.9    28.9    6974.0    31.1    7101.7
GR   31.0    7180.4    33.8    7263.1    33.5    7302.3    25.9    7349.0    26.5    7379.0
GR   26.1    7417.3    26.8    7425.3    29.4    7452.1    28.1    7480.3    28.7    7493.3
GR   32.8    7535.6    31.4    7608.8    26.3    7720.5    27.2    7799.1    26.2    8069.5
GR   26.7    8192.5    26.9    8263.9    26.9    8324.1    24.7    8695.1    24.0    8741.4
GR   24.7    8744.4    25.7    8765.1    25.8    8810.     27.3    8811.     27.2    9067.6
GR   27.9    9125.3    27.2    9223.5    27.9    9321.0    28.0    9440.4    29.0    9484.7
GR   27.0    9596.1    28.3    9648.3    26.5    9725.8    26.6    9734.5    28.0    9749.3
GR   27.9    9761.8    27.0    9780.9    29.4    9826.2    30.0    9867.1    26.0    9902.3
GR   25.2    9942.5    26.7    10000.0   25.2    10063.8   25.9    10080.8   27.7    10249.2
GR   28.2    10738.3   28.2    10835.1   28.5    10846.6   29.2    10871.0   28.8    10958.1
GR   27.0    10980.0   27.1    10999.9   28.2    11025.1   27.3    11180.7   25.2    11215.9
GR   24.8    11225.5   24.8    11228.8   25.0    11296.0   25.9    11302.5   25.9    11308.6
GR   24.5    11314.0   25.2    11330.2   24.9    11474.2   24.6    11602.9   24.5    11608.4
GR   24.8    11645.2   24.6    11752.6   25.2    11865.4   25.6    11963.4   25.0    12003.1
GR   24.9    12014.4   23.8    12020.8   24.9    12037.2   24.8    12090.4   24.7    12096.3
GR   24.8    12161.5   25.0    12165.5   26.0    12181.4   28.2    12251.9   27.9    12318.9
GR   26.3    12324.3   25.8    12347.1   27.3    12364.8   26.9    12380.6   24.4    12397.9
GR   25.     12435.    25.8    12441.7   28.5    12466.8

ET           5.1       7.1               6385.6  11363.2   11363.2 12550.
NH   3.      .045      8197.5  .09       8701.4  .045      12795.7
X1   198.0   88.       9988.4  10014.0   420.    180.      213.0
GR   31.7    6385.6    26.2    6402.0    25.7    6582.7    25.3    6584.1    25.3    6611.2
GR   30.6    6663.     31.2    6788.1    25.0    6825.3    26.0    6936.1    26.6    6940.4
GR   27.7    6976.6    27.3    7039.3    26.5    7152.1    27.6    7278.6    71.     7867.3
GR   25.1    7877.6    24.     7909.5    24.3    7937.9    27.6    7972.2    29.     8025.4
GR   24.0    8085.6    24.3    8152.0    23.1    8197.5    23.8    8343.8    23.9    8552.1
GR   25.2    8574.5    25.3    8606.3    26.2    8613.8    26.0    8689.2    26.9    8701.4
GR   27.     8735.     27.5    9252.5    28.     9779.9    28.5    9903.1    28.7    9925.2
GR   25.7    9938.3    27.1    9988.4    25.0    9991.1    25.0    10013.2   27.0    10014.
GR   25.7    10088.9   24.7    10146.6   26.2    10265.9   26.7    10267.6   27.9    10298.4
GR   74.5    10302.4   74.5    10532.8   26.0    10550.4   25.8    10793.4   24.4    10810.9
GR   24.4    10840.7   26.3    10903.9   53.5    10909.6   53.5    11177.8   25.7    11193.1
GR   25.1    11267.4   25.9    11273.4   27.5    11284.2   27.4    11291.1   24.1    11303.2
GR   25.2    11344.9   27.0    11351.9   27.3    11363.2   25.1    11372.2   24.0    11410.7
GR   26.0    11420.8   26.5    11435.9   25.7    11438.2   25.7    11448.0   26.3    11487.3
GR   49.4    11500.9   49.4    11646.0   26.4    11655.6   24.4    11735.2   24.1    11763.1
GR   24.1    11826.8   56.4    11845.1   56.4    12046.1   25.1    12061.4   23.1    12203.4
GR   53.7    12215.2   52.6    12662.9   23.8    12671.    23.8    12704.4   24.2    12723.3
GR   25.8    12785.9   25.3    12795.7   26.     12831.5
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ET             5.1       7.1                 6669.     11393.8   11404.4   12850.7
NH   2.        .09       8628.3    .045      13487.
QT   2.        2270.     2270.
       MATCH MAIN DECK
X1   200.0     95.       9988.9    10016.1   500.      300.      386.3
GR   27.8      6669.0    26.6      6673.8    23.9      6748.9    24.0      6941.4    27.8      7015.2
GR   32.4      7284.9    26.9      7351.2    24.9      7868.7    24.9      8316.4    24.7      8495.0
GR   24.8      8644.9    27.3      8657.3    27.1      8842.1    26.5      8910.7    26.1      8951.1
GR   27.3      9047.5    27.5      9051.7    27.5      9059.3    73.6      9263.2    73.0      9630.8
GR   26.8      9634.4    25.2      9726.3    26.1      9877.2    26.7      9878.2    27.8      9894.6
GR   30.3      9903.5    29.8      9909.8    26.9      9921.4    27.9      9988.9    26.5      9991.4
GR   26.5      10000.0   26.5      10014.2   27.3      10016.1   26.6      10073.9   24.4      10094.3
GR   26.3      10256.8   27.7      10259.5   28.3      10272.5   75.1      10280.1   75.1      10398.9
GR   28.9      10415.8   28.9      10426.8   26.8      10435.3   27.6      10547.4   100.8     10685.2
GR   26.6      10708.    25.6      10893.    26.2      11026.7   54.1      11035.5   54.1      11301.8
GR   25.5      11317.7   24.4      11393.8   26.6      11404.4   26.6      11409.5   24.1      11425.7
GR   25.2      11459.3   24.8      11490.0   24.4      11511.7   29.1      11533.9   56.3      11791.2
GR   25.5      11798.1   24.5      11872.9   24.0      11902.5   54.6      11917.5   54.6      12118.1
GR   25.0      12123.0   23.0      12261.2   54.1      12271.8   54.1      12497.0   22.8      12498.3
GR   22.8      12539.3   53.1      12548.1   53.1      12726.    23.5      12734.8   24.2      12778.6
GR   25.1      12831.    28.       12838.6   28.7      12850.7   26.8      12858.7   27.1      12916.9
GR   28.9      12922.7   29.2      12931.6   26.7      12941.8   24.8      13056.6   55.       13067.9
GR   55.       13193.5   23.6      13203.4   23.6      13233.5   25.2      13243.4   25.5      13285.9
GR   62.2      13291.3   62.2      13449.7   26.2      13463.3   25.       13487.    25.9      13558.1

ET             5.1       5.1                 6817.6    13600.    6817.6    9985.
NH   2.        .09       8128.4    .045      13559.
QT   2.        2270.     2270.
X1   202.0     95.       9985.0    10012.6   460.      500.      425.8
GR   34.2      6809.8    34.1      6817.6    27.3      6841.1    25.6      6955.6    24.5      7183.0
GR   25.2      7360.1    25.6      8128.4    25.7      8505.6    25.8      8832.7    25.8      9031.3
GR   27.7      9051.2    27.3      9156.7    27.6      9159.1    27.5      9235.5    28.5      9330.2
GR   32.8      9365.8    31.3      9466.3    25.1      9530.0    25.1      9671.1    23.7      9775.8
GR   25.4      9887.2    25.5      9889.3    26.0      9898.0    30.9      9911.2    28.7      9920.8
GR   28.1      9931.5    29.0      9985.0    27.4      9988.0    27.4      10000.0   27.4      10010.8
GR   28.1      10012.6   28.1      10067.0   24.3      10090.9   26.5      10262.4   26.2      10289.2
GR   27.0      10323.3   28.9      10325.0   29.3      10335.9   87.2      10341.9   87.2      10514.7
GR   26.8      10536.2   26.6      10613.2   25.6      10677.6   26.2      10724.8   25.9      10773.6
GR   24.3      10804.6   53.8      10811.6   53.8      11033.0   26.0      11049.5   26.4      11133.8
GR   44.4      11143.1   44.4      11395.9   25.4      11408.6   25.2      11467.5   28.1      11477.1
GR   27.7      11481.7   26.1      11489.2   25.3      11497.9   26.7      11530.9   28.6      11536.2
GR   28.4      11544.1   26.0      11546.8   25.2      11583.5   26.8      11591.8   29.5      11614.5
GR   50.1      11625.3   50.1      11776.9   26.7      11783.4   25.5      11839.6   25.8      11881.8
GR   56.6      11897.0   56.6      12053.9   27.3      12060.8   25.8      12114.3   25.8      12138.5
GR   27.1      12179.5   27.2      12233.6   26.5      12242.3   28.1      12252.1   27.1      12378.6
GR   52.5      12385.0   52.5      12777.3   28.4      12791.5   28.0      12805.7   27.3      12904.0
GR   27.7      12930.7   27.2      12966.8   28.1      12973.6   29.1      12982.2   28.3      12992.8
GR   28.4      13039.8   57.1      13047.6   57.1      13546.7   31.2      13559.0   30.1      13600.3
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ET            5.1       5.1                 6932.3    11900.0   6932.3    9975.7
NH  2.        .09       9973.7    .045      12238.1
X1  204.0     95.0      9986.6    10012.7   554.8     350.      484.0
GR  36.0      6923.3    36.0      6932.3    28.1      6965.0    26.6      8121.5    26.6      8623.1
GR  26.6      9430.4    28.0      9940.8    28.6      9973.7    30.1      9975.7    29.8      9986.6
GR  28.2      9988.3    27.7      10000.0   27.7      10010.1   28.2      10012.7   28.5      10064.4
GR  32.6      10075.2   32.4      10081.3   28.9      10092.9   28.6      10119.7   29.6      10150.7
GR  30.3      10153.1   31.0      10179.7   72.0      10187.9   72.0      10364.6   30.6      10375.2
GR  31.1      10436.9   71.1      10450.4   71.1      10638.9   30.4      10654.0   30.4      10676.4
GR  30.4      10679.3   27.2      10823.2   28.0      10878.9   25.6      10881.8   25.6      10895.7
GR  54.6      10903.6   54.6      11101.8   26.8      11118.1   26.2      11152.4   27.6      11183.2
GR  28.4      11250.0   29.0      11251.6   29.3      11253.8   46.7      11259.2   46.7      11535.2
GR  28.7      11549.6   28.1      11584.7   28.6      11586.8   29.0      11593.7   27.0      11604.4
GR  26.9      11609.3   26.8      11612.6   27.6      11644.7   27.6      11652.8   27.0      11696.7
GR  27.3      11711.1   27.7      11780.9   28.7      11785.9   55.7      11798.6   55.7      12238.1
GR  25.2      12243.9   25.9      12259.5   27.8      12265.6   27.5      12325.0   28.7      12334.2
GR  28.5      12347.7   27.6      12355.0   27.1      12496.1   28.1      12548.9   29.7      12634.2
GR  57.0      12642.9   57.0      12835.3   28.4      12842.0   27.9      12851.9   28.7      12957.3
GR  29.6      12962.4   31.7      12971.2   31.2      12984.4   28.5      13000.0   28.6      13060.1
GR  29.7      13064.9   30.6      13074.4   28.6      13081.0   28.9      13104.1   57.8      13112.4
GR  57.8      13837.7   31.9      13854.0   31.9      13881.6   33.7      13903.6   34.6      13959.8
GR  65.6      13965.5   65.6      14340.7   35.0      14359.7   35.0      14426.2   36.1      14448.0
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1553 STARTING NC CARD OMITTED
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   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*PROF 1



1490 NH CARD USED
*SECNO 172.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     11320.0   12309.0  TYPE=      1  TARGET=      989.000
        STARTING WSEL FROM MAIN DECK
   172.000      3.95     18.35       .00     18.35     18.35       .00       .00       .00 100000.00
        .6        .0        .0        .6        .0        .0      58.5        .0        .0 100000.00
       .00       .00       .00       .01      .000      .000      .045      .000     14.40  11320.00
   .000000      666.      603.     3267.         0         0         0       .00    109.95  11798.13


FLOW DISTRIBUTION FOR SECNO=    172.00          CWSEL=     18.35

STA=   11320.   10016.   11333.   11334.   11368.   11375.   11744.   11746.   11753.   11767.   11798.
  PER Q=      .0       5.6      2.8     80.9      5.5      2.2       .8       .4       .0      1.9
   AREA=      .0       5.3      1.6     38.6      4.2      3.1       .8       .8       .1      3.9
    VEL=      .0        .0       .0       .0       .0       .0       .0       .0       .0       .0
  DEPTH=      .0        .0       .9      1.1       .6       .0       .4       .1       .0       .1

*SECNO 174.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.06

3685 20 TRIALS ATTEMPTED WSEL,CWSEL

3470 ENCROACHMENT STATIONS=     11327.5   11450.0  TYPE=      1  TARGET=      122.500
   174.000      5.85     21.15     20.43     21.15     21.26       .11      2.91       .00 100000.00
     332.4        .0        .0     332.4        .0        .0     125.3       2.7       3.0 100000.00
       .14       .00       .00      2.65      .000      .000      .045      .000     15.30  11333.36
   .003929      854.      819.     1299.        21        18         0       .00     92.35  11450.00
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


FLOW DISTRIBUTION FOR SECNO=    174.00          CWSEL=     21.15

STA=   11333.    10016.   11341.   11374.   11377.   11388.   11389.   11421.   11450.
  PER Q=       .0       2.2      38.8      2.3      3.4       .1       4.1      49.2
   AREA=       .0       4.9      48.4      3.1      7.2       .3       6.8      54.5
    VEL=       .0       1.5       2.7      2.4      1.6       .6       2.0       3.0
  DEPTH=       .0        .0       1.5      1.3       .7       .2        .2       1.8

*SECNO 176.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=    11244.8   11700.0  TYPE=      1  TARGET=      455.200
   176.000      5.36     22.06       .00     22.06     22.11       .05       .85       .00 100000.00
     332.4        .0        .0     332.4        .0        .0     187.1       3.6       4.0 100000.00
       .17       .00       .00      1.78      .000      .000      .045      .000     16.70  11267.99
   .003310      339.      466.      235.         2         0         0       .00    254.98  11700.00


FLOW DISTRIBUTION FOR SECNO=    176.00          CWSEL=     22.06

STA=   11268.    10067.   11285.   11334.   11379.   11389.   11402.   11596.   11624.   11700.
  PER Q=       .0       3.8      30.5      38.3      9.6      3.5      4.2      2.5      7.6
   AREA=       .0       9.6      51.6      57.6     13.3      8.4     15.4      9.4     21.8
    VEL=       .0       1.3       2.0       2.2      2.4      1.4       .9       .9      1.2
  DEPTH=       .0        .0       1.1       1.3      1.4       .6       .1       .3       .3

1490 NH CARD USED
*SECNO 178.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.06


3470 ENCROACHMENT STATIONS=    11323.0   11720.0  TYPE=      1  TARGET=      397.000
   178.000      5.87     22.47       .00     22.47     22.48       .00       .37       .00 100000.00
     354.2        .0        .0     354.2        .0        .0     720.6       8.1       7.2 100000.00
       .42       .00       .00       .49      .000      .000      .090      .000     16.60  11323.00
   .000402      220.       61.      432.         3         0         0       .00    397.00  11720.00
   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


FLOW DISTRIBUTION FOR SECNO=    178.00          CWSEL=     22.47

STA=   11323.   10069.   11390.   11720.
  PER Q=       .0      13.2     86.8
   AREA=       .0     105.4    615.1
    VEL=       .0        .4       .5
  DEPTH=       .0        .1      1.9

1490 NH CARD USED
*SECNO 180.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .51


3470 ENCROACHMENT STATIONS=     11149.6   11780.0  TYPE=       1  TARGET=      630.400
   180.000       5.89      22.79        .00      22.79      22.80        .01        .32        .00 100000.00
     408.2         .0         .0      408.2         .0         .0      455.7       13.4       11.6 100000.00
       .54        .00        .00        .90       .000       .000       .077       .000      16.90  11183.16
   .002055       237.        52.       394.          1          0          0        .00     576.50  11780.00


FLOW DISTRIBUTION FOR SECNO=    180.00          CWSEL=     22.79

STA=   11183.   10079.   11264.   11365.   11570.   11742.   11759.   11780.
  PER Q=       .0      29.3     41.6     25.0      3.8       .2       .0
   AREA=       .0      80.5    163.8    160.6     48.4      2.4       .0
    VEL=       .0       1.5      1.0       .6       .3       .4       .0
  DEPTH=       .0        .1      1.6       .8       .3       .1       .0

1490 NH CARD USED
*SECNO 182.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.70
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     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST



3470 ENCROACHMENT STATIONS=     11264.8   11900.0  TYPE=      1  TARGET=       635.200
   182.000      7.01     22.81       .00     22.81     22.81       .00       .02       .00 100000.00
     408.2        .0        .0     408.2        .0        .0     869.8      13.8      11.9 100000.00
       .55       .00       .00       .47      .000      .000      .070      .000     15.80  11268.11
   .000283      185.      133.       26.         2         0         0       .00    612.24  11900.00


FLOW DISTRIBUTION FOR SECNO=     182.00          CWSEL=      22.81

STA=   11268.    10052.    11276.    11322.    11325.    11337.    11344.    11755.    11759.    11784.    11798.    11856.    11876.
  PER Q=       .0        .3       2.0        .0        .1        .4      52.0        .2        .5       4.4      23.3       8.5
   AREA=       .0       3.4      35.1        .8       3.0       6.4     596.7       3.0       4.7      22.5     111.6      39.4
    VEL=       .0        .3        .2        .1        .1        .2        .4        .2        .5        .8        .9        .9
  DEPTH=       .0        .0        .8        .4        .3        .9       1.5        .8        .2       1.7       1.9       2.0

STA=   11876.    11900.
  PER Q=      8.4
   AREA=     43.3
    VEL=       .8
  DEPTH=      1.8

1490 NH CARD USED
*SECNO 184.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.81


3470 ENCROACHMENT STATIONS=     11361.2   12160.0  TYPE=      1  TARGET=       798.800
   184.000      6.97     22.87       .00     22.87     22.87       .00       .06       .00 100000.00
     469.5        .0        .0     469.5        .0        .0    1496.8      23.4      17.7 100000.00
       .87       .00       .00       .31      .000      .000      .080      .000     15.90  11361.20
   .000114      638.      625.      354.         2         0         0       .00    798.80  12160.00


FLOW DISTRIBUTION FOR SECNO=     184.00          CWSEL=      22.87

STA=   11361.    10016.    11412.    11599.    11672.    11704.    11787.    11828.    11888.    11924.    11963.    12078.    12160.
  PER Q=       .0       8.9      19.4       5.5       3.7      13.2       8.1       9.5       3.2       6.3      15.5       6.5
   AREA=       .0     126.2     344.6     111.2      62.3     197.1     111.1     142.8      60.0      93.2     163.4      85.0
    VEL=       .0        .3        .3        .2        .3        .3        .3        .3        .3        .3        .4        .4
  DEPTH=       .0        .1       1.8       1.5       2.0       2.4       2.7       2.4       1.7       2.4       1.4       1.0
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      SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
      Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
      TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
      SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 1490 NH CARD USED
 *SECNO 186.000

 3265 DIVIDED FLOW


 3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .53


 3470 ENCROACHMENT STATIONS=     11295.9   12500.0  TYPE=      1  TARGET=      1204.100
    186.000      5.89     23.09       .00     23.09     23.10       .01       .22       .00 100000.00
      748.6        .0        .0     748.6        .0        .0    1169.8      44.1      32.2 100000.00
       1.16       .00       .00       .64      .000      .000      .087      .000     17.20  11295.90
    .001049      304.      338.      677.         3         0         0       .00   1075.19  12500.00


 FLOW DISTRIBUTION FOR SECNO=     186.00          CWSEL=      23.09

 STA=   11296.    10056.    11318.    11339.    11378.    11475.    11538.    11597.    11688.    11749.    11750.    11889.    12500.
   PER Q=       .0        .4       6.9      14.1      13.6       1.4        .4       8.1       8.6        .0        .2      46.4
    AREA=       .0       6.5      34.3     103.0     145.6      30.9      14.1     104.1      92.0        .3       5.0     633.9
     VEL=       .0        .5       1.5       1.0        .7        .3        .2        .6        .7        .2        .3        .5
   DEPTH=       .0        .0       1.7       2.6       1.5        .5        .2       1.1       1.5        .5        .0       1.0

 *SECNO 188.000

 3265 DIVIDED FLOW


 3470 ENCROACHMENT STATIONS=     11361.1   12200.0  TYPE=      1  TARGET=       838.900
    188.000      7.97     23.57     22.65     23.57     23.61       .04       .51       .00 100000.00
      976.6        .0        .0     976.6        .0        .0     593.7      52.4      39.5 100000.00
       1.23       .00       .00      1.65      .000      .000      .045      .000     15.60  11361.10
    .001448      308.      366.      408.        11        16         0       .00    478.39  11985.08


 FLOW DISTRIBUTION FOR SECNO=     188.00          CWSEL=      23.57

 STA=   11361.    10016.    11434.    11559.    11651.    11693.    11792.    11812.    11883.    11985.
   PER Q=       .0       4.1      15.2      39.9      20.0      12.3       3.7       4.8        .0
    AREA=       .0      44.6     120.6     190.2      92.7      72.2      25.0      47.8        .6
     VEL=       .0        .9       1.2       2.0       2.1       1.7       1.4       1.0        .2
   DEPTH=       .0        .0       1.0       2.1       2.2        .7       1.2        .7        .0
 SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
 Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
 TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
 SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*SECNO 190.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=    11284.1   12260.0  TYPE=      1  TARGET=      975.900
   190.000      4.17     24.37       .00     24.37     24.40       .03       .80       .00 100000.00
    1000.0        .0        .0    1000.0        .0        .0     718.6      60.7      46.8 100000.00
      1.34       .00       .00      1.39      .000      .000      .045      .000     20.20  11293.71
   .001446      499.      469.      550.         5         0         0       .00    669.44  12260.00


FLOW DISTRIBUTION FOR SECNO=     190.00          CWSEL=     24.37

STA=   11294.    10013.    11353.    11373.    11527.    11723.    11895.    11979.    12033.    12260.
  PER Q=         .0       9.7       4.7      11.9      26.1       8.5       6.1      10.6      22.2
   AREA=         .0      67.2      29.3      63.7     158.8      75.0      58.2      70.6     196.0
    VEL=         .0       1.4       1.6       1.9       1.6       1.1       1.1       1.5       1.1
  DEPTH=         .0        .1       1.5        .4        .8        .4        .7       1.3        .9

*SECNO 192.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=    11241.3   12270.0  TYPE=      1  TARGET=     1028.700
        TRIMBLE ROAD
   192.000      1.53     24.63       .00     24.63     24.67       .04       .27       .00 100000.00
    1000.0        .0        .0    1000.0        .0        .0     590.7      62.9      48.9 100000.00
      1.37       .00       .00      1.69      .000      .000      .045      .000     23.10  11268.42
   .002327      220.      181.      150.         4         0         0       .00    593.69  12270.00


FLOW DISTRIBUTION FOR SECNO=     192.00          CWSEL=     24.63

STA=   11268.    10068.    11293.    11317.    11533.    11767.    11811.    11816.    11880.    11903.    11907.    12263.    12270.
  PER Q=         .0        .3       3.7      55.2      36.1       2.5        .0        .2       1.7        .1        .0        .2
   AREA=         .0       5.4      23.4     286.6     229.4      23.7        .5       3.2      14.5       1.2        .4       2.3
    VEL=         .0        .6       1.6       1.9       1.6       1.0        .4        .7       1.2        .7        .5        .7
  DEPTH=         .0        .0       1.0       1.3       1.0        .5        .1        .0        .6        .3        .0        .3
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   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


*SECNO 194.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .30


3470 ENCROACHMENT STATIONS=    11227.6   12300.0  TYPE=      1  TARGET=      1072.400
   194.000        .62      24.92        .00      24.92      25.06        .14        .39        .00 100000.00
    1000.0         .0         .0     1000.0         .0         .0      330.7       63.7       50.1 100000.00
      1.37        .00        .00       3.02       .000       .000       .045       .000      24.30  11380.06
   .026720        78.        73.        70.          3          0          0        .00     866.71  12246.76


FLOW DISTRIBUTION FOR SECNO=    194.00          CWSEL=     24.92

STA=  11380.   10346.   11441.   11803.   12144.   12247.
  PER Q=       .0      1.5     54.6     42.6      1.3
   AREA=       .0      9.7    168.4    141.7     11.0
    VEL=       .0      1.6      3.2      3.0      1.2
  DEPTH=       .0       .0       .5       .4       .1

*SECNO 196.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.18


3470 ENCROACHMENT STATIONS=    11308.6   12325.0  TYPE=      1  TARGET=      1016.400
   196.000       1.71      25.51      25.20      25.51      25.56        .06        .50        .00 100000.00
    1000.0         .0         .0     1000.0         .0         .0      516.5       64.1       51.0 100000.00
      1.38        .00        .00       1.94       .000       .000       .045       .000      23.80  11310.10
   .005622        95.        86.        47.         19         17          0        .00     835.62  12173.62


FLOW DISTRIBUTION FOR SECNO=    196.00          CWSEL=     25.51

STA=   11310.   10081.   11474.   11603.   11645.   11753.   11865.   12021.   12037.   12090.   12162.   12174.
  PER Q=       .0     12.1     20.2      8.4     18.7     12.3      4.8      5.2      6.6     11.2       .6
   AREA=       .0     79.0     97.9     36.9     87.0     68.8     34.2     19.0     35.1     54.1      4.5
    VEL=       .0      1.5      2.1      2.3      2.2      1.8      1.4      2.7      1.9      2.1      1.4
  DEPTH=       .0       .1       .8       .9       .8       .6       .2      1.2       .7       .8       .4
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   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


1490 NH CARD USED
*SECNO 198.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.94


3470 ENCROACHMENT STATIONS=     11363.2   12550.0  TYPE=      1  TARGET=      1186.800
    198.000       2.88      25.98        .00      25.98      26.03        .05        .47        .00 100000.00
     1000.0         .0         .0     1000.0         .0         .0      559.5       66.4       53.5 100000.00
       1.41        .00        .00       1.79       .000       .000       .045       .000      23.10  11368.60
    .001487       420.       213.       180.          4          0          0        .00     380.17  12204.51


FLOW DISTRIBUTION FOR SECNO=    198.00          CWSEL=     25.98

STA=   11369.   10014.   11411.   11735.   11763.   11827.   12203.   12205.
  PER Q=       .0       9.0       6.9       8.9      23.2      51.9        .1
   AREA=       .0      56.7      65.0      48.3     119.8     268.2       1.6
    VEL=       .0       1.6       1.1       1.8       1.9       1.9        .8
  DEPTH=       .0        .0        .2       1.7       1.9        .7       1.4

1490 NH CARD USED
*SECNO 200.000

3265 DIVIDED FLOW

3280 CROSS SECTION     200.00 EXTENDED       .51 FEET


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.23


3470 ENCROACHMENT STATIONS=     11404.4   12850.7  TYPE=      1  TARGET=      1446.300
        MATCH MAIN DECK
    200.000       3.61      26.41        .00      26.41      26.49        .07        .46        .00 100000.00
     2270.0         .0         .0     2270.0         .0         .0     1034.1       71.8       56.6 100000.00
       1.44        .00        .00       2.20       .000       .000       .045       .000      22.80  11410.71
    .001546       500.       386.       300.          3          0          0        .00     498.59  12834.44
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


FLOW DISTRIBUTION FOR SECNO=    200.00          CWSEL=     26.41

STA=   11411.   10016.   11459.   11490.   11512.   11873.   11903.   12261.   12539.   12779.   12831.   12834.
  PER Q=        .0      6.0      3.1      3.3      8.2      6.1     34.4     18.9     12.1      7.7       .1
   AREA=        .0     76.6     43.4     39.3    115.3     64.0    335.0    150.4    115.4     92.4      2.3
    VEL=        .0      1.8      1.6      1.9      1.6      2.2      2.3      2.9      2.4      1.9       .9
  DEPTH=        .0       .1      1.4      1.8       .3      2.2       .9       .5       .5      1.8       .7

1490 NH CARD USED
*SECNO 202.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.38


3470 ENCROACHMENT STATIONS=     6817.6   13600.0  TYPE=      1  TARGET=     6782.400
   202.000      3.05     26.75       .00     26.75     26.75       .00       .26       .00     29.00
    2270.0    1820.8        .0     449.2    3487.3        .0     796.1     100.8      78.2     28.10
      1.70       .52       .00       .56      .061      .000      .045      .000     23.70   6878.22
   .000274      460.      426.      500.         3         0         0       .00   3468.11  12243.82


FLOW DISTRIBUTION FOR SECNO=    202.00          CWSEL=     26.75

STA=    6878.    7183.    7360.    8128.    8506.    8833.    9031.    9671.    9776.    9887.    9900.   10013.   10262.
  PER Q=       7.0      6.2     15.2     10.6      7.9      4.4      8.2     10.5     10.0       .3       .0      7.3
   AREA=     430.8    336.3   1036.3    414.5    326.7    188.4    251.3    245.9    244.9     12.2       .0    250.2
    VEL=        .4       .4       .3       .6       .5       .5       .7      1.0       .9       .6       .0       .7
  DEPTH=       1.4      1.9      1.3      1.1      1.0       .9       .4      2.3      2.2       .9       .0      1.0

STA=   10262.   10805.   11468.   11882.   12244.
  PER Q=       4.2      3.4      3.9      1.0
   AREA=     188.4    133.1    170.3     54.0
    VEL=        .5       .6       .5       .4
  DEPTH=        .3       .2       .4       .1

1490 NH CARD USED
*SECNO 204.000
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     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST



3265 DIVIDED FLOW

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     6932.3    11900.0  TYPE=       1  TARGET=     4967.700
   204.000      1.92     27.12     27.12     27.12     27.30       .18       .49       .00     29.80
    2270.0    1886.4        .0     383.6     841.5        .0      58.5     131.8     110.6     28.20
      1.75      2.24       .00      6.55      .090      .000      .045      .000     25.20   7717.61
   .050315      555.      484.      350.        20        21         0       .00   2011.60  11702.64


FLOW DISTRIBUTION FOR SECNO=    204.00          CWSEL=     27.12

STA=     7718.     8122.     8623.     9430.     9621.    10013.    10896.    11152.    11703.
  PER Q=      7.1      27.9      44.8       3.3        .0       9.5       5.1       2.3
   AREA=    105.8     262.8     422.9      50.0        .0      22.6      21.7      14.2
    VEL=      1.5       2.4       2.4       1.5        .0       9.5       5.4       3.7
  DEPTH=       .3        .5        .5        .3        .0        .0        .1        .0
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TW      SEC 192 TO 190

   ASQ      QCOMP     ERRAC     TASQ       TCQ      TABER     NITER     DSWS      USWS     DSSNO     USSNO
      .00       .00       .00       .00       .00       .00        21    24.373    24.630   190.000   192.000


TW      SEC 190 TO 188

   ASQ      QCOMP     ERRAC     TASQ       TCQ      TABER     NITER     DSWS      USWS     DSSNO     USSNO
    23.35     22.86      2.14     23.35     22.86      2.14        21    23.566    24.373   188.000   190.000


TW      SEC 188 TO 186

   ASQ      QCOMP     ERRAC     TASQ       TCQ      TABER     NITER     DSWS      USWS     DSSNO     USSNO
   228.02    228.68       .29    251.37    251.54       .07        21    23.090    23.566   186.000   188.000


TW      SEC 186 TO 184

   ASQ      QCOMP     ERRAC     TASQ       TCQ      TABER     NITER     DSWS      USWS     DSSNO     USSNO
   279.13    277.25       .68    530.51    528.79       .32        21    22.872    23.090   184.000   186.000


TW      SEC 184 TO 182

   ASQ      QCOMP     ERRAC     TASQ       TCQ      TABER     NITER     DSWS      USWS     DSSNO     USSNO
    61.33     64.70      5.36    591.84    593.49       .28        21    22.811    22.872   182.000   184.000


TW      SEC 182 TO 180

   ASQ      QCOMP     ERRAC     TASQ       TCQ      TABER     NITER     DSWS      USWS     DSSNO     USSNO
      .00       .00       .00    591.84    593.49       .28        21    22.787    22.811   180.000   182.000


TW      SEC 180 TO 178

   ASQ      QCOMP     ERRAC     TASQ       TCQ      TABER     NITER     DSWS      USWS     DSSNO     USSNO
    53.96     54.47       .94    645.80    647.96       .33        21    22.474    22.787   178.000   180.000


TW      SEC 178 TO 176

   ASQ      QCOMP     ERRAC     TASQ       TCQ      TABER     NITER     DSWS      USWS     DSSNO     USSNO
    21.75     21.97       .99    667.55    669.93       .36        21    22.058    22.474   176.000   178.000
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TW      SEC 176  TO 174

   ASQ       QCOMP      ERRAC      TASQ        TCQ       TABER      NITER      DSWS       USWS      DSSNO      USSNO
      .00        .00        .00     667.55     669.93        .36         21     21.152     22.058    174.000    176.000
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                                                                     THIS RUN EXECUTED 25MAY95    16:00:32
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 HEC-2 WATER SURFACE PROFILES

 Version   4.6.2;  May 1991
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NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


50% BLOCKED CONDITIONS 1

SUMMARY PRINTOUT


      SECNO      XLCH        Q     STENCL      SSTA      STCHL     STCHR     ENDST    STENCR    TOPWID      10*KS       EG

     172.000      .00       .60  11320.00  11320.00   9986.20  10015.80  11798.13  12309.00    109.95       .00     18.35

*    174.000    819.00    332.45  11327.50  11333.36   9985.30  10015.90  11450.00  11450.00     92.35     39.29     21.26

     176.000    466.40    332.45  11244.80  11267.99   9930.30  10066.70  11700.00  11700.00    254.98     33.10     22.11

*    178.000     61.00    354.20  11323.00  11323.00   9598.70  10068.50  11720.00  11720.00    397.00      4.02     22.48

*    180.000     51.90    408.16  11149.60  11183.16   9921.90  10079.00  11780.00  11780.00    576.50     20.55     22.80

*    182.000    132.70    408.16  11264.80  11268.11   9976.10  10052.40  11900.00  11900.00    612.24      2.83     22.81

*    184.000    625.20    469.49  11361.20  11361.20   9986.50  10015.50  12160.00  12160.00    798.80      1.14     22.87

*    186.000    337.70    748.63  11295.90  11295.90   9978.70  10055.80  12500.00  12500.00   1075.19     10.49     23.10

     188.000    365.50    976.65  11361.10  11361.10   9983.10  10016.30  11985.08  12200.00    478.39     14.48     23.61

     190.000    469.20   1000.00  11284.10  11293.71   9984.20  10013.10  12260.00  12260.00    669.44     14.46     24.40

     192.000    181.20   1000.00  11241.30  11268.42   9921.30  10067.50  12270.00  12270.00    593.69     23.27     24.67

*    194.000     73.40   1000.00  11227.60  11380.06   9910.80  10345.60  12246.76  12300.00    866.71    267.20     25.06

*    196.000     85.80   1000.00  11308.60  11310.10   9902.30  10080.80  12173.62  12325.00    835.62     56.22     25.56

*    198.000    213.00   1000.00  11363.20  11368.60   9988.40  10014.00  12204.51  12550.00    380.17     14.87     26.03

*    200.000    386.30   2270.00  11404.40  11410.71   9988.90  10016.10  12834.44  12850.70    498.59     15.46     26.49

*    202.000    425.80   2270.00   6817.60   6878.22   9985.00  10012.60  12243.82  13600.00   3468.11      2.74     26.75

*    204.000    484.00   2270.00   6932.30   7717.61   9986.60  10012.70  11702.64  11900.00   2011.60    503.15     27.30
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50% BLOCKED CONDITIONS 1

SUMMARY PRINTOUT


     SECNO      XLCH        Q       VCH      AREA       VOL     ELMIN     DEPTH     DIFEG        EG    DIFWSP    DIFWSX

   172.000       .00      .60       .00     58.48       .00     14.40      3.95       .00     18.35       .00       .00

*  174.000    819.00   332.45       .00    125.26      2.74     15.30      5.85       .00     21.26       .00      2.80

   176.000    466.40   332.45       .00    187.13      3.58     16.70      5.36       .00     22.11       .00       .91

*  178.000     61.00   354.20       .00    720.57      8.08     16.60      5.87       .00     22.48       .00       .42

*  180.000     51.90   408.16       .00    455.70     13.40     16.90      5.89       .00     22.80       .00       .31

*  182.000    132.70   408.16       .00    869.80     13.79     15.80      7.01       .00     22.81       .00       .02

*  184.000    625.20   469.49       .00   1496.80     23.42     15.90      6.97       .00     22.87       .00       .06

*  186.000    337.70   748.63       .00   1169.77     44.12     17.20      5.89       .00     23.10       .00       .22

   188.000    365.50   976.65       .00    593.70     52.39     15.60      7.97       .00     23.61       .00       .48

   190.000    469.20  1000.00       .00    718.57     60.68     20.20      4.17       .00     24.40       .00       .81

   192.000    181.20  1000.00       .00    590.66     62.93     23.10      1.53       .00     24.67       .00       .26

*  194.000     73.40  1000.00       .00    330.72     63.67     24.30       .62       .00     25.06       .00       .29

*  196.000     85.80  1000.00       .00    516.55     64.13     23.80      1.71       .00     25.56       .00       .58

*  198.000    213.00  1000.00       .00    559.52     66.35     23.10      2.88       .00     26.03       .00       .48

*  200.000    386.30  2270.00       .00   1034.11     71.84     22.80      3.61       .00     26.49       .00       .43

*  202.000    425.80  2270.00       .00   4283.38    100.76     23.70      3.05       .00     26.75       .00       .33

*  204.000    484.00  2270.00       .00    900.03    131.76     25.20      1.92       .00     27.30       .00       .38
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SUMMARY OF ERRORS AND SPECIAL NOTES


CAUTION SECNO=     174.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
WARNING SECNO=     174.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     178.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     180.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     182.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     184.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     186.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     194.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     196.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     198.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     200.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     202.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     204.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     204.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     204.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL
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GR   38.2    12855.1   37.3     12860.2   37.3     12882.2   37.5     12892.6   39.3     12906.1
GR   38.8    13032.3   38.5     13166.2   36.9     13170.8   36.4     13193.9   37.4     13203.1
GR   38.3    13233.5   37.3     13292.8   35.6     13326.2   35.1     13342.5   35.8     13382.0
GR   35.3    13414.3   36.4     13429.3   38.0     13475.9   37.4     13547.6   37.7     13590.3
GR   37.4    13682.7   37.1     13685.2   37.1     13710.5   38.0     13716.2   38.5     13803.2

ET           5.1       5.1      9.1       7555.5   14288.5   7555.5   10000.    7547.1   9629.0
NH   2.      .09       9955.2   .045      14288.5
X1   214.0   36.0      9688.1   10121.7   50.      50.       61.8
GR   48.5    7547.1    48.2     7555.5    28.6     7618.7    30.6     8172.1    29.2     8526.9
GR   28.6    8899.7    27.9     8913.1    29.0     9245.6    31.2     9688.1    31.1     9955.2
GR   31.6    10000.0   31.6     10021.1   31.0     10121.7   31.3     10383.3   31.1     10776.8
GR   31.9    11038.9   31.8     11336.9   32.8     11765.4   33.7     11835.8   32.0     11885.3
GR   32.3    11984.0   33.3     12127.2   34.4     12298.4   36.7     12364.8   38.4     12516.1
GR   36.1    12761.1   37.1     12963.4   36.4     13212.6   36.3     13384.7   36.5     13558.0
GR   37.2    13717.6   38.1     13932.2   39.8     14129.3   41.4     14288.5   43.0     14512.2
GR   43.0    14693.9

ET           5.1       5.1      9.1       7687.    13864.5   7687.    10000.    7687.0   9570.0
NH   2.      .09       9939.4   .045      13864.5
X1   216.0   95.       9939.4   10078.6   60.      50.       64.4
GR   29.2    7687.     30.6     8099.     29.9     8545.3    28.1     9077.7    28.1     9077.8
GR   29.9    9602.2    30.8     9842.2    32.9     9874.6    31.9     9916.1    30.6     9939.4
GR   31.2    9966.5    31.9     10000.0   30.6     10065.7   31.0     10078.6   34.2     10116.8
GR   34.0    10136.2   31.3     10156.0   31.6     10178.5   35.5     10204.1   33.9     10222.2
GR   34.5    10329.7   34.4     10375.9   32.0     10394.0   32.4     10418.3   32.6     10432.6
GR   31.4    10449.1   31.5     10472.8   32.3     10480.2   34.3     10652.4   33.3     10712.9
GR   31.9    10750.3   35.3     10786.4   34.0     10963.0   31.5     11011.3   31.5     11067.3
GR   32.7    11099.    33.4     11205.    32.9     11343.6   34.4     11376.7   34.3     11423.7
GR   32.4    11529.3   34.5     11544.3   34.5     11740.8   32.8     11762.6   32.6     11774.9
GR   34.     11826.4   34.      11845.6   32.2     11901.8   35.1     11930.9   35.      12177.1
GR   33.6    12182.3   33.7     12214.3   34.3     12221.4   35.9     12301.5   37.9     12371.9
GR   40.5    12419.7   40.4     12447.1   37.8     12499.9   37.9     12545.8   39.9     12578.2
GR   39.9    12621.    39.2     12665.7   37.5     12677.9   36.8     12703.4   36.9     12730.7
GR   37.2    12743.9   38.6     12752.6   38.1     12800.1   36.7     12805.5   36.7     12829.
GR   37.7    12835.7   39.3     12858.8   40.3     12943.6   39.7     13035.6   37.8     13099.3
GR   37.2    13102.    37.2     13127.3   40.6     13158.8   40.3     13270.8   36.8     13296.
GR   36.8    13313.8   39.5     13327.4   39.2     13337.6   35.1     13363.8   36.4     13400.8
GR   35.3    13437.8   42.2     13490.4   41.      13532.6   37.6     13571.2   37.9     13595.7
GR   40.     13629.7   40.      13701.2   39.6     13798.1   38.2     13805.    40.7     13864.5

ET           5.1       5.1      9.1       7687.    11600.    7687.    9921.9    7687.0   9800.0
NH   2.      .09       9945.8   .045      11600.
X1   218.0   95.       9991.    10013.8   100.     150.      181.6
GR   29.2    7687.0    30.6     8099.0    30.2     8253.2    30.2     8393.3    29.3     8418.1
GR   29.9    8545.3    28.9     8960.7    32.9     8980.4    28.4     8995.3    28.7     9030.5
GR   28.1    9077.7    31.8     9094.9    28.9     9116.9    28.7     9237.9    31.2     9921.9
GR   30.2    9945.8    30.7     9985.8    29.8     9991.     28.9     10000.    29.      10010.
GR   31.0    10013.8   30.4     10050.6   34.6     10072.7   31.3     10093.9   32.5     10151.7
GR   80.3    10175.7   80.3     10322.4   32.3     10348.0   31.9     10404.0   33.0     10457.3
GR   31.4    10469.5   32.1     10493.1   51.1     10502.4   51.1     10700.9   32.6     10712.6
GR   33.2    10764.8   51.5     10775.8   51.5     10977.3   33.0     10991.0   31.6     11009.0
GR   31.6    11048.    35.2     11070.4   35.1     11086.7   33.7     11096.9   33.0     11147.3
GR   53.2    11159.6   53.1     11447.8   33.3     11463.3   33.7     11556.1   58.8     11572.7
GR   56.9    11736.6   33.2    11749.5   32.4    11791.9   33.1    11809.8   35.4    11824.4
GR   32.8    11844.    33.2    11880.8   36.5    11894.0   34.9    11918.4   33.2    11958.3
GR   34.5    11962.2   36.4    11976.4   32.3    11995.1   31.6    12051.6   49.8    12065.0
GR   49.8    12202.5   32.4    12208.8   31.2    12228.8   34.1    12277.3   35.7    12332.7
GR   34.4    12363.9   63.6    12378.3   63.6    12583.9   34.4    12595.5   34.4    12611.9
GR   37.7    12623.0   38.5    12697.2   58.8    12705.6   58.8    12796.9   39.0    12801.5
GR   38.8    12887.0   66.1    12904.2   66.1    13444.4   37.8    13461.7   36.1    13505.5
GR   36.9    13536.4   41.4    13604.1   59.6    13612.9   59.6    13791.7   40.0    13805.2
GR   40.3    13856.6   60.9    13862.6   60.9    14041.2   41.5    14054.8   37.6    14082.3

QT   3.      2270.     2270.   2270.
ET           5.1       5.1     9.1       9297.   14264.0                   9169.4  11500.0
NC   .045    .045      .045
X1   220.0   91.       10000.  10127.2   1519.3  1120.     1400.8
GR   33.3    9169.4    55.9    9179.9    55.9    9289.3    34.4    9297.2    33.4    9352.6
GR   37.     9606.4    37.7    9676.4    124.9   9699.2    124.9   9802.9    37.4    9814.5
GR   37.     9882.1    37.4    9899.7    37.2    9920.3    35.4    9935.1    35.7    9958.5
GR   37.1    10000.0   35.1    10055.0   36.7    10127.2   37.2    10162.1   52.6    10165.2
GR   52.6    10260.2   36.4    10264.6   35.7    10294.5   36.6    10315.2   53.8    10319.7
GR   53.8    10372.7   36.1    10378.6   35.4    10492.8   34.8    10517.2   36.4    10562.7
GR   36.2    10572.0   34.6    10577.5   34.4    10603.3   50.3    10608.6   50.3    10895.9
GR   33.7    10904.7   32.7    10934.9   33.2    10954.6  -33.0    10979.8   34.4    10993.7
GR   34.5    11006.3   49.8    11019.1   49.8    11199.4   33.9    11204.0   33.4    11213.3
GR   33.9    11257.0   49.6    11267.3   49.6    11373.1   33.5    11378.3   33.2    11432.2
GR   34.2    11438.1   34.3    11444.0   33.3    11449.7   34.3    11563.0   53.6    11573.3
GR   53.6    11843.2   34.7    11846.6   33.8    11856.5   34.0    11861.8   33.7    11864.4
GR   34.4    11919.9   36.1    11930.6   36.5    11943.6   34.8    11953.3   34.5    11963.1
GR   35.7    11994.4   35.1    12045.0   35.2    12047.4   35.6    12056.7   35.6    12073.5
GR   35.3    12075.3   34.8    12133.4   34.7    12136.2   35.2    12142.0   54.7    12149.5
GR   54.7    12312.6   32.1    12316.1   31.6    12349.2   34.3    12415.4   34.9    12502.7
GR   64.6    12515.3   64.6    12751.8   34.5    12764.6   34.5    12778.6   38.1    12802.0
GR   38.1    12825.5   36.6    12837.1   35.7    12858.0   36.8    12863.4   37.0    12921.6
GR   71.7    12926.2

ET           5.1       5.1     9.1       9877.3  14269.                    9877.3  12450.0
NH   3.      .045      10524.  .09       10801.  .045      14269.
X1   222.0   96.       9987.3  10014.7   570.    620.      581.5
GR   37.5    9877.3    36.4    9889.     36.1    9949.5    36.3    9987.3    34.8    9990.8
GR   34.6    10000.    34.8    10013.2   36.3    10014.7   36.     10059.2   36.3    10066.3
GR   37.7    10076.    36.7    10086.4   37.3    10115.1   38.     10135.6   102.1   10187.6
GR   102.1   10385.1   38.8    10396.4   38.8    10467.2   42.0    10484.1   41.5    10493.3
GR   35.0    10524.0   34.9    10735.0   35.6    10736.9   35.5    10742.8   34.8    10748.5
GR   36.0    10801.0   35.8    10802.6   36.2    10808.6   37.9    10812.8   39.0    10821.0
GR   79.8    10829.4   79.8    11032.8   35.8    11054.9   33.3    11082.8   33.6    11106.7
GR   33.6    11144.2   34.2    11145.6   34.7    11161.0   54.1    11179.6   54.1    11532.8
GR   33.3    11539.9   33.3    11575.5   53.2    11586.4   53.2    11745.3   34.0    11755.4
GR   33.0    11776.8   33.7    11807.5   54.4    11818.9   53.7    12046.0   37.5    12052.3
GR   36.4    12077.3   36.1    12078.4   36.8    12122.6   36.2    12164.4   39.3    12174.8
GR   39.4    12184.4   36.5    12192.5   36.8    12205.5   52.9    12212.6   52.4    12551.5
GR   36.4    12558.5   36.4    12594.7   38.3    12644.8   65.6    12651.0   64.2    12870.5
GR   38.2    12883.9   38.6    13038.3   39.4    13044.7   40.3    13103.6   60.9    13108.2
GR   60.9    13309.9   40.2    13321.7   39.8    13373.2   40.6    13431.4   42.3    13463.9
GR   42.3    13466.6   62.0    13470.4   62.2    13569.3   44.6    13580.0   44.6    13600.1
GR   41.7    13612.0   41.9    13671.1   42.0    13676.4   44.8    13688.6   44.8    13695.6
GR  40.8     13708.8  42.5     13769.1  44.4     13777.4  44.6     13782.3  44.8     13802.9
GR  66.8     13810.3  66.8     14167.8  45.4     14181.9  45.9     14229.0  47.0     14230.8
GR  47.2     14269.0

ET           5.1      5.1      5.1      10000.   14144.7
NH  3.       .045     10508.6  .09      10820.4  .045     14144.7
     BROKAW RD
X1  224.0    95.      9958.2   10094.5  193.     100.     193.0
GR  35.8     9958.2   37.3     10000.0  35.5     10091.4  35.8     10094.5  36.3     10105.2
GR  38.7     10114.7  38.3     10123.0  36.0     10133.1  36.5     10444.3  39.6     10453.8
GR  39.6     10459.6  37.0     10469.6  37.5     10508.6  39.0     10520.0  39.8     10527.4
GR  38.8     10533.9  36.0     10551.8  36.6     10820.4  37.4     10841.8  38.1     10874.4
GR  35.7     11073.1  33.9     11122.3  34.0     11159.6  35.1     11172.9  36.7     11185.8
GR  36.9     11201.0  37.1     11276.8  37.1     11362.4  35.7     11398.8  35.7     11425.3
GR  35.6     11518.2  34.8     11583.4  35.6     11590.4  36.6     11598.1  36.7     11762.7
GR  35.8     11774.5  35.8     11800.4  37.9     11825.4  37.7     12053.5  35.7     12070.3
GR  36.9     12130.6  36.5     12169.2  36.9     12177.4  39.6     12192.0  39.6     12217.5
GR  38.2     12232.8  38.3     12277.8  40.3     12289.6  40.4     12318.4  38.9     12332.5
GR  39.2     12412.9  40.3     12426.3  40.3     12461.3  39.1     12487.4  39.3     12510.3
GR  40.2     12522.2  40.0     12538.4  38.6     12543.0  37.7     12571.6  37.9     12597.0
GR  39.2     12606.3  40.5     12613.5  40.4     12730.3  38.9     12740.6  39.3     12754.3
GR  41.5     12788.4  41.4     12847.4  39.7     12878.3  39.3     12900.9  39.8     12990.6
GR  40.9     13225.7  41.7     13396.0  42.3     13406.3  43.3     13415.1  43.3     13424.2
GR  41.7     13439.8  42.0     13462.0  42.8     13469.2  42.9     13552.5  41.8     13573.9
GR  42.3     13656.3  43.3     13661.4  43.3     13670.9  45.7     13711.2  46.1     13757.0
GR  46.1     13810.9  46.2     13933.2  47.3     13947.7  47.3     13960.7  44.9     13993.9
GR  45.1     14020.1  46.4     14034.4  46.6     14107.9  46.5     14124.2  48.1     14144.7

ET           5.1      5.1      5.1      10000.   12250.
NH  2.       .09      11109.   .045     14418.4
X1  226.0    53.0     9952.4   10549.7  59.5     66.      65.9
GR  34.9     9712.5   36.1     9952.4   37.5     9973.1   38.0     10000.0  37.1     10048.0
GR  37.1     10549.7  37.6     10552.8  37.9     10736.5  37.0     10982.8  36.4     11101.8
GR  35.8     11109.0  35.3     11182.8  35.3     11330.7  36.2     11339.4  36.6     11520.3
GR  36.6     11772.2  36.2     12063.0  36.1     12067.0  36.5     12118.8  36.8     12192.8
GR  37.5     12385.1  37.9     12408.5  38.5     12410.1  38.5     12423.3  39.6     12430.3
GR  40.0     12574.4  41.5     12777.6  41.2     12795.8  40.4     12800.4  40.2     12837.3
GR  39.7     12842.1  39.8     12927.4  40.2     12931.7  41.6     13146.8  41.1     13150.0
GR  41.9     13305.0  42.8     13475.4  43.2     13477.6  43.8     13555.3  43.5     13558.0
GR  44.1     13645.0  44.4     13647.8  44.9     13866.6  45.9     13964.0  47.6     14153.6
GR  47.4     14157.2  48.4     14234.1  48.7     14236.2  49.7     14279.7  50.7     14418.4
GR  50.5     14496.8  49.6     14512.2  49.2     14532.7

ET           5.1      5.1      5.1      10000.   12320.
NH  2.       .09      11104.8  .045     14552.
X1  228.0    55.0     9927.9   10165.0  67.1     68.6     53.3
GR  35.2     9733.8   34.7     9756.7   36.2     9760.6   37.1     9804.4   36.1     9927.9
GR  37.6     9973.0   37.8     10000.0  36.6     10085.7  36.0     10165.0  35.9     10300.9
GR  35.9     10436.8  36.3     10524.1  36.2     10596.6  37.0     10725.9  36.8     10876.9
GR  36.2     11011.9  35.4     11104.8  35.2     11146.7  35.0     11154.0  34.5     11197.1
GR  35.0     11204.9  35.4     11232.2  35.3     11251.7  35.3     11388.3  35.4     11510.9
GR  35.0     11614.2  35.2     11819.8  35.1     11917.1  36.4     11941.6  36.3     11969.4
GR  34.7     12032.9  34.7     12048.6  35.0     12111.9  35.1     12192.5  35.9     12205.2
GR  36.5     12304.5  37.5     12474.2  38.6     12700.4  38.9     12849.9  38.7     12854.7
GR  39.4    12899.9   39.3      12918.8   39.1      12961.2   40.3      13259.1   41.2      13441.7
GR  41.7    13556.5   41.5      13564.9   42.1      13610.5   41.9      13650.0   42.3      13655.3
GR  43.9    13833.5   45.2      14046.9   47.2      14193.2   48.0      14322.4   48.6      14552.0

ET          5.1       5.1       5.1       10000.    11730.
NH  2.      .09       11460.    .045      12046.4
X1  236.    59.       9943.7    10067.2   100.      850.      100.
GR  36.2    9943.7    37.3      9972.3    38.1      10000.    36.5      10055.6   36.6      10067.2
GR  36.1    10088.9   38.       10097.4   35.9      10107.3   35.9      10217.4   35.9      10312.9
GR  36.9    10327.9   37.1      10366.3   38.1      10377.2   37.5      10490.8   39.       10508.3
GR  37.7    10535.7   38.       10597.5   37.1      10608.2   37.9      10619.6   37.8      10657.7
GR  35.1    10667.5   35.5      10671.2   38.       10687.1   37.4      10710.5   36.8      10726.4
GR  37.8    10883.    38.7      10900.3   39.9      10910.2   39.1      10916.4   36.8      10931.6
GR  36.7    11048.7   36.5      11063.4   37.1      11070.8   38.2      11079.9   37.7      11092.9
GR  38.1    11143.1   36.9      11154.    37.       11197.2   38.       11218.2   38.1      11348.2
GR  40.9    11370.3   41.5      11403.7   41.4      11407.5   38.4      11430.6   35.9      11477.9
GR  36.3    11515.    36.4      11534.    36.3      11558.9   36.5      11561.1   36.7      11573.6
GR  38.2    11587.4   38.9      11597.9   37.1      11606.4   36.       11639.1   37.5      11693.2
GR  38.7    11697.1   38.8      11703.6   60.3      11720.2   60.3      12046.4

ET          5.1       5.1       5.1       10579.1   12539.4
NC  .045    .045      .045
X1  240.    40.       10640.5   10664.6   650.      350.      300.
GR  39.1    10477.6   40.9      10551.4   42.2      10579.1   41.3      10588.8   41.8      10603.
GR  40.6    10640.5   35.8      10652.    35.8      10653.4   38.9      10664.6   38.3      10679.1
GR  37.5    10714.2   37.5      10783.6   38.3      11226.5   39.2      11692.3   41.8      11703.6
GR  42.1    11716.2   38.9      11745.6   37.       11763.1   37.3      11788.7   37.3      11804.7
GR  37.1    11822.9   37.5      11825.8   37.8      11844.    38.9      11896.3   40.       11909.6
GR  41.8    12034.8   40.       12078.    40.2      12165.1   41.2      12174.4   40.9      12188.3
GR  39.1    12236.8   39.6      12276.7   38.8      12309.2   38.3      12346.6   38.8      12352.7
GR  39.6    12360.9   39.5      12374.1   40.9      12413.6   62.4      12431.3   62.4      12539.4

ET          5.1       5.1       5.1       10514.7   12112.6
NH  2.      .09       11650.    .045      12135.1
X1  242.    34.       10624.9   10687.2   250.      400.      250.
GR  37.4    10447.3   50.6      10477.8   52.3      10503.7   52.8      10506.5   53.3      10514.7
GR  52.7    10526.9   52.8      10544.5   46.2      10589.4   45.8      10605.7   43.3      10624.9
GR  36.     10663.6   37.3      10673.3   38.6      10687.2   38.6      10697.9   37.8      10743.6
GR  38.3    10757.2   38.8      10768.5   38.2      10790.6   37.5      10918.4   37.6      11149.4
GR  38.     11461.5   38.4      11646.6   38.       11652.2   38.1      11712.9   38.3      11716.2
GR  40.2    11727.7   41.1      11734.5   58.7      11741.4   58.7      12005.2   38.7      12023.3
GR  37.8    12085.4   42.3      12100.6   42.2      12112.6   41.       12135.1
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     SECNO      DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q          QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME       VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE      XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


*PROF 1



*SECNO 188.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     8275.0    11361.1  TYPE=      1  TARGET=     3086.100
        STARTING WSEL FROM DECK 2
   188.000       5.24     20.84       .00       .00     20.84       .00       .00       .00     22.40
    1293.0     1284.9       1.2       7.0    2270.3       8.5      35.3        .0        .0     22.30
       .00        .57       .14       .20      .045      .045      .045      .000     15.60   8275.00
   .000074         0.        0.        0.         0         0         0       .00   1062.22  10282.30


FLOW DISTRIBUTION FOR SECNO=     188.00          CWSEL=     20.84

STA=    8275.    8320.    8455.    8550.    8667.    8928.    9065.    9914.   10016.   10282.
  PER Q=      6.1      18.0       8.9       8.7      30.5      25.9       1.2        .1        .5
   AREA=    137.9     397.2     226.6     240.0     686.7     497.2      84.6       8.5      35.3
    VEL=       .6        .6        .5        .5        .6        .7        .2        .1        .2
  DEPTH=      3.1       2.9       2.4       2.0       2.6       3.6        .1        .3        .1

*SECNO 190.000

3265 DIVIDED FLOW

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     8400.0    11284.1  TYPE=      1  TARGET=     2884.100
        NO FLOW DIVISION AT FIRST ST
   190.000       1.80     22.00     22.00       .00     22.31       .31       .13       .00     23.90
    1270.0      676.5        .0     593.5     173.6        .0     119.0      15.0       8.7     24.20
       .03       3.90       .00      4.99      .045      .000      .045      .000     20.20   8451.22
   .025642       499.      469.      550.        20        21         0       .00    438.57  10863.44


FLOW DISTRIBUTION FOR SECNO=     190.00          CWSEL=     22.00
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     SECNO      DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q          QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME       VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE      XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


 STA=    8451.    8505.    8551.    8572.    8609.    8636.    8695.    8731.    9905.   10013.   10465.   10481.   10507.
   PER Q=     11.0      4.2      3.9      9.6      4.8     14.9      4.8       .1       .0      4.4      7.7      8.5
    AREA=     35.2     18.4     13.0     27.9     16.1     43.6     18.1      1.4       .0     19.3     17.3     22.7
     VEL=      4.0      2.9      3.8      4.4      3.8      4.3      3.3      1.2       .0      2.9      5.6      4.8
   DEPTH=       .7       .4       .6       .8       .6       .7       .5       .0       .0       .0      1.1       .9

 STA=   10507.   10858.   10863.
   PER Q=     24.4      1.7
    AREA=     55.0      4.7
     VEL=      5.6      4.6
   DEPTH=       .2       .9

*SECNO 192.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.74


3470 ENCROACHMENT STATIONS=     8000.0    11241.3  TYPE=      1  TARGET=      3241.300
        TRIMBLE RD
   192.000      1.80     24.90       .00       .00     25.06       .15      2.75       .00     25.30
    1270.0    1171.3        .0      98.7     362.6        .0      61.4      16.7      10.9     25.00
       .05      3.23       .00      1.61      .045      .000      .045      .000     23.10   8465.73
   .008472      220.      181.      150.         3         0         0       .00    540.58  11239.01


FLOW DISTRIBUTION FOR SECNO=     192.00          CWSEL=      24.90

STA=    8466.    8503.    8624.    8643.    8702.    8773.    8791.    8831.   10068.   11174.   11238.   11239.
  PER Q=      3.9     36.5      6.7     19.1     21.5      3.8       .7       .0      3.4      4.4       .0
   AREA=     22.7    138.8     24.1     70.7     81.8     16.5      8.0       .0     31.1     30.2       .1
    VEL=      2.2      3.3      3.5      3.4      3.3      2.9      1.0       .0      1.4      1.8       .0
  DEPTH=       .6      1.2      1.3      1.2      1.2       .9       .2       .0       .0       .5       .1

*SECNO 194.000

3265 DIVIDED FLOW
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 SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
 Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
 TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
 SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .67


3470 ENCROACHMENT STATIONS=      6570.5   11227.6  TYPE=       1  TARGET=      4657.100
   194.000      1.55     25.85       .00       .00     26.00       .15       .95       .00     26.20
    1270.0    1266.9        .0       3.1     408.3        .0       3.8      17.4      12.2     27.20
       .06      3.10       .00       .82      .045      .000      .045      .000     24.30   8008.72
   .018934       78.       73.       70.         3         0         0       .00    855.85  11227.60


FLOW DISTRIBUTION FOR SECNO=    194.00          CWSEL=     25.85

STA=     8009.     8079.     8306.     8700.     8815.    10346.    11228.
  PER Q=       1.4      35.1      61.0       2.3        .0        .2
   AREA=      12.5     137.0     238.3      20.5        .0       3.8
    VEL=       1.4       3.2       3.2       1.4        .0        .8
  DEPTH=        .2        .6        .6        .2        .0        .0

*SECNO 196.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  2.68


3470 ENCROACHMENT STATIONS=      6702.1   11308.6  TYPE=       1  TARGET=      4606.500
   196.000      2.65     26.45       .00       .00     26.50       .05       .49       .00     26.00
    1270.0     797.7     152.0     320.3     452.2     112.6     160.6      18.6      14.0     25.90
       .07      1.76      1.35      1.99      .045      .045      .045      .000     23.80   7345.62
   .002635       95.       86.       47.         3         0         0       .00    951.18  11308.60


FLOW DISTRIBUTION FOR SECNO=    196.00          CWSEL=     26.45

STA=     7346.     8695.     8741.     8765.     8810.     9902.    10081.    11226.    11296.    11309.
  PER Q=      32.8      21.3       5.4       3.3        .0      12.0       4.4      19.6       1.1
   AREA=     290.4      97.2      32.2      31.4       1.0     112.6      41.1     109.6       9.8
    VEL=       1.4       2.8       2.1       1.3        .6       1.4       1.4       2.3       1.5
  DEPTH=        .2       2.1       1.4        .7        .0        .7        .0       1.6        .8
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     SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
     Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
     TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
     SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


1490 NH CARD USED
*SECNO 198.000

3265 DIVIDED FLOW

3280 CROSS SECTION    198.00 EXTENDED       .62 FEET


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  4.39


3470 ENCROACHMENT STATIONS=      6385.6   11363.2  TYPE=       1  TARGET=      4977.600
   198.000      3.52     26.62       .00       .00     26.62       .00       .12       .00     27.10
    1270.0     899.6      18.7     351.8    1999.9      38.0     790.6      32.7      24.8     27.00
       .28       .45       .49       .44      .067      .045      .045      .000     23.10   6400.75
   .000137      420.      213.      180.         4         0         0       .00   1896.53  11350.42


FLOW DISTRIBUTION FOR SECNO=    198.00          CWSEL=     26.62

STA=    6401.    6611.    6936.    7910.    7938.    8152.    8198.    8344.    8552.    9971.   10014.   10147.   10266.
  PER Q=      4.2      4.5      3.3      3.9     11.5      8.2     15.2     17.3      2.8      1.5      3.6      4.7
   AREA=    158.5    140.4     69.5     70.1    233.2    132.8    463.6    576.8    155.1     38.0    106.2    139.5
    VEL=       .3       .4       .6       .7       .6       .8       .4       .4       .2       .5       .4       .4
  DEPTH=       .8       .4       .1      2.5      1.1      2.9      3.2      2.8       .1      1.5       .8      1.2

STA=   10266.   10793.   10841.   11267.   11345.   11350.
  PER Q=      4.3      4.5      6.0      4.6       .1
   AREA=    175.1     92.7    171.0    102.2      3.9
    VEL=       .3       .6       .4       .6       .3
  DEPTH=       .3      2.0       .4      1.3       .7

1490 NH CARD USED
*SECNO 200.000

3265 DIVIDED FLOW

3280 CROSS SECTION    200.00 EXTENDED       .78 FEET


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.49
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   SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
   Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
   TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
   SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


3470 ENCROACHMENT STATIONS=      6669.0    12850.7  TYPE=       1  TARGET=      6181.700
   200.000       3.89      26.69        .00        .00      26.69        .01        .07        .00      27.90
    2270.0      981.1         .6     1288.2     2801.0        4.3     1769.8       69.3       48.9      27.30
       .49        .35        .15        .73       .085       .045       .045       .000      22.80    6673.46
   .000197       500.       386.       300.          2          0          0        .00    3040.68   12835.15


FLOW DISTRIBUTION FOR SECNO=    200.00          CWSEL=      26.69

STA=    6673.     6941.     7869.     8316.     8495.     8645.     9877.     9878.    10016.    10257.    11027.    11394.    11459.
  PER Q=      11.9       4.8      12.0       5.2       4.6       4.7        .0        .0       5.9       3.4       3.9       3.1
   AREA=     634.1     481.9     798.9     336.5     290.0     259.4        .3       4.3     241.3     213.1     132.4     103.0
    VEL=        .4        .2        .3        .4        .4        .4        .2        .1        .6        .4        .7        .7
  DEPTH=       2.4        .5       1.8       1.9       1.9        .2        .3        .2       1.0        .3        .4       1.6

STA=   11459.    11512.    11873.    12261.    12539.    12779.    12831.    12835.
  PER Q=       3.0       3.9      17.3       7.6       5.1       3.5        .1
   AREA=      96.9     138.5     445.0     161.9     127.8     106.6       3.3
    VEL=        .7        .6        .9       1.1        .9        .7        .4
  DEPTH=       1.9        .4       1.1        .6        .5       2.0        .8

1490 NH CARD USED
*SECNO 202.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=      6817.6    13600.0  TYPE=       1  TARGET=      6782.400
   202.000       3.09      26.79        .00        .00      26.80        .00        .10        .00      29.00
    2270.0     1813.8         .0      456.2     3600.8         .0      837.4      118.1       84.3      28.10
       .74        .50        .00        .54       .061       .000       .045       .000      23.70    6875.23
   .000246       460.       426.       500.          2          0          0        .00    3496.14   12244.10


FLOW DISTRIBUTION FOR SECNO=    202.00          CWSEL=      26.79
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


STA=    6875.    7183.    7360.    8128.    8506.    8833.    9031.    9671.    9776.    9887.    9900.   10013.   10262.
  PER Q=      6.9      6.1     15.2     10.8      8.0      4.5      8.1     10.2      9.8       .3       .0      7.3
   AREA=    444.4    344.2   1070.5    431.2    341.3    197.3    258.8    250.6    249.9     12.7       .0    258.5
    VEL=       .4       .4       .3       .6       .5       .5       .7       .9       .9       .5       .0       .6
  DEPTH=      1.4      1.9      1.4      1.1      1.0      1.0       .4      2.4      2.2      1.0       .0      1.0

STA=   10262.   10805.   11468.   11882.   12244.
  PER Q=      4.3      3.4      4.0      1.0
   AREA=    202.1    139.6    179.0     58.2
    VEL=       .5       .6       .5       .4
  DEPTH=       .4       .2       .4       .2

1490 NH CARD USED
*SECNO 204.000

3265 DIVIDED FLOW

3685 20 TRIALS ATTEMPTED WSEL,CWSEL
3693 PROBABLE MINIMUM SPECIFIC ENERGY
3720 CRITICAL DEPTH ASSUMED

3470 ENCROACHMENT STATIONS=     6923.3   11703.0  TYPE=       1  TARGET=      4779.700
   204.000      1.93     27.13     27.13       .00     27.30       .17       .44       .00     29.80
    2270.0    1887.7        .0     382.3     846.8        .0      58.9     150.0     117.0     28.20
       .79      2.23       .00      6.50      .090      .000      .045      .000     25.20   7715.45
   .049428      555.      484.      350.        20        17         0       .00   2015.32  11702.78


FLOW DISTRIBUTION FOR SECNO=     204.00           CWSEL=       27.13

STA=    7715.    8122.    8623.    9430.    9622.   10013.   10896.   11152.   11703.
  PER Q=      7.1     27.9     44.8      3.4       .0      9.4      5.1      2.3
   AREA=    106.9    264.2    425.2     50.6       .0     22.6     21.8     14.4
    VEL=      1.5      2.4      2.4      1.5       .0      9.4      5.3      3.6
  DEPTH=       .3       .5       .5       .3       .0       .0       .1       .0

1490 NH CARD USED
*SECNO 206.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  6.00
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST



3470 ENCROACHMENT STATIONS=     6902.4  10400.0  TYPE=      1  TARGET=     3497.600
   206.000      2.21     30.01       .00       .00     30.02       .01      2.72       .00     29.70
    2270.0    2187.4      61.7      20.9    2798.3      41.2      25.8     178.9     149.6     29.50
      1.03       .78      1.50       .81      .090      .045      .045      .000     27.80   7824.62
   .001374      665.      704.      750.         7         0         0       .00   2240.77  10065.39


FLOW DISTRIBUTION FOR SECNO=    206.00          CWSEL=     30.01

STA=    7825.    8404.    8681.    9311.    9749.    9986.   10016.   10065.
  PER Q=      22.1      21.7      41.2       9.0       2.4       2.7        .9
   AREA=     708.9     525.4    1071.7     372.4     119.9      41.2      25.8
    VEL=        .7        .9        .9        .5        .4       1.5        .8
  DEPTH=       1.2       1.9       1.7        .9        .5       1.4        .5

1490 NH CARD USED
*SECNO 208.000

3470 ENCROACHMENT STATIONS=     7187.1   9930.0  TYPE=      1  TARGET=     2742.900
   208.000      1.70     30.40       .00       .00     30.41       .01       .39       .00 100000.00
    2270.0    2270.0        .0        .0    2561.4        .0        .0     193.4     162.0 100000.00
      1.10       .89       .00       .00      .090      .000      .000      .000     28.70   7529.87
   .002134      232.      300.      385.         5         0         0       .00   2400.13   9930.00


FLOW DISTRIBUTION FOR SECNO=    208.00          CWSEL=     30.40

STA=    7530.    7915.    8475.    8679.    9296.    9607.    9930.   10014.
  PER Q=       1.7      17.3      15.0      45.4      15.2       5.4        .0
   AREA=     113.3     531.6     326.7     987.6     389.5     212.6        .0
    VEL=        .3        .7       1.0       1.0        .9        .6        .0
  DEPTH=        .3       1.0       1.6       1.6       1.3        .7        .0

1490 NH CARD USED
*SECNO 210.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     7377.9   9970.0  TYPE=      1  TARGET=     2592.100
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     SECNO      DEPTH     CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
     Q          QLOB      QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
     TIME       VLOB      VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
     SLOPE      XLOBL     XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


    210.000      2.08     30.78        .00        .00      30.79        .01        .38        .00 100000.00
     2270.0    2270.0        .0         .0     2855.9         .0         .0      206.0      173.5 100000.00
       1.17       .79       .00        .00       .090       .000       .000       .000      28.70   7413.49
    .001673      203.      175.       250.          1          0          0        .00    2528.63   9970.00


 FLOW DISTRIBUTION FOR SECNO=    210.00          CWSEL=     30.78

 STA=    7413.     7416.     7940.     8462.     8530.     8985.     9659.     9909.     9948.     9951.     9970.    10014.
   PER Q=        .0      10.3      15.0       3.4      35.3      34.2       1.5        .0        .0        .3        .0
    AREA=       1.1     407.9     510.8      93.3     809.6     927.6      94.5       1.5       1.5       8.1        .0
     VEL=        .4        .6        .7        .8       1.0        .8        .4        .2        .4        .8        .0
   DEPTH=        .4        .8       1.0       1.4       1.8       1.4        .4        .0        .5        .4        .0

 1490 NH CARD USED
 *SECNO 212.000

 3470 ENCROACHMENT STATIONS=     7618.7    9670.0  TYPE=       1  TARGET=     2051.300
         CHARCOT AVE
    212.000      2.28     30.88        .00        .00      30.89        .01        .10        .00 100000.00
     2270.0    2270.0        .0         .0     3012.0         .0         .0      210.7      177.2 100000.00
       1.20       .75       .00        .00       .090       .000       .000       .000      28.60   7618.70
    .001135       70.       69.        80.          2          0          0        .00    2051.30   9670.00


 FLOW DISTRIBUTION FOR SECNO=    212.00          CWSEL=     30.88

 STA=    7619.     8172.     8527.     8900.     9246.     9421.     9670.    10080.
   PER Q=      20.4       8.4      28.5      28.7       8.2       5.7        .0
    AREA=     708.4     347.7     738.2     719.5     259.0     239.1        .0
     VEL=        .7        .5        .9        .9        .7        .5        .0
   DEPTH=       1.3       1.0       2.0       2.1       1.5       1.0        .0

 1490 NH CARD USED
 *SECNO 214.000

 3470 ENCROACHMENT STATIONS=     7547.1    9629.0  TYPE=       1  TARGET=     2081.900
    214.000      3.03     30.93        .00        .00      30.94        .01        .05        .00 100000.00
     2270.0    2270.0        .0         .0     3107.5         .0         .0      214.2      179.5 100000.00
       1.22       .73       .00        .00       .090       .000       .000       .000      27.90   7611.18
    .000956       50.       62.        50.          2          0          0        .00    2017.82   9629.00
   SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


FLOW DISTRIBUTION FOR SECNO=    214.00          CWSEL=     30.93

STA=    7611.     7619.    8172.    8527.    8900.    8913.    9246.    9629.   10122.
  PER Q=        .2      20.1      8.4      27.3      1.6      34.0      8.3       .0
   AREA=       8.8     737.5    366.4     757.8     35.9     825.5    375.6       .0
    VEL=        .5        .6       .5        .8      1.0        .9       .5       .0
  DEPTH=       1.2       1.3      1.0       2.0      2.7       2.5      1.0       .0

1490 NH CARD USED
*SECNO 216.000

3470 ENCROACHMENT STATIONS=     7687.0    9570.0  TYPE=      1  TARGET=      1883.000
   216.000      2.89     30.99       .00       .00     31.00       .01       .06       .00 100000.00
    2270.0    2270.0        .0        .0    2852.3        .0        .0     218.3     182.2 100000.00
      1.24       .80       .00       .00      .090      .000      .000      .000     28.10   7687.00
   .001150       60.       64.       50.         0         0         0       .00   1883.00   9570.00


FLOW DISTRIBUTION FOR SECNO=    216.00          CWSEL=     30.99

STA=    7687.     8099.    8545.    9078.    9078.    9570.   10079.
  PER Q=      11.8       6.7     41.5       .0      40.1        .0
   AREA=     450.5     331.8   1061.3       .3    1008.4        .0
    VEL=        .6        .5       .9      1.1        .9        .0
  DEPTH=       1.1        .7      2.0      2.9       2.0        .0

1490 NH CARD USED
*SECNO 218.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=     7687.0    9800.0  TYPE=      1  TARGET=      2113.000
   218.000      3.01     31.11       .00       .00     31.12       .01       .12       .00 100000.00
    2270.0    2270.0        .0        .0    3011.5        .0        .0     225.0     186.8 100000.00
      1.27       .75       .00       .00      .090      .000      .000      .000     28.10   7687.00
   .001165      100.      182.      150.         2         0         0       .00   2089.83   9800.00


FLOW DISTRIBUTION FOR SECNO=    218.00          CWSEL=     31.11
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


STA=     7687.     8099.     8393.     8545.     8961.     9031.     9078.     9238.     9800.    10014.
  PER Q=      14.0       5.1       7.3      25.2       4.9       6.2      13.3      24.0        .0
   AREA=     498.8     237.2     225.9     710.6     114.3     127.9     319.2     777.6        .0
    VEL=        .6        .5        .7        .8       1.0       1.1        .9        .7        .0
  DEPTH=       1.2        .8       1.5       1.7       1.6       2.7       2.0       1.4        .0

*SECNO 220.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .25


3470 ENCROACHMENT STATIONS=     9169.4   11500.0  TYPE=       1  TARGET=      2330.600
   220.000      3.14     34.74       .00       .00     35.13       .39      4.01       .00     37.10
    2270.0     393.6        .0    1876.4     109.3        .0     354.6     284.0     229.8     36.70
      1.35      3.60       .00      5.29      .045      .000      .045      .000     31.60   9169.40
   .018022     1519.     1401.     1120.         4         0         0       .00    454.76  11500.00


FLOW DISTRIBUTION FOR SECNO=     220.00          CWSEL=     34.74

STA=     9169.     9353.     9447.    10127.    10935.    10955.    10980.    11006.    11257.    11432.    11500.
  PER Q=       8.0       9.3        .0      12.5      10.1      11.1       3.2      11.8      18.1      15.9
   AREA=      46.6      62.6        .0      52.6      35.1      41.2      17.9      57.5      75.0      75.2
    VEL=       3.9       3.4        .0       5.4       6.5       6.1       4.0       4.7       5.5       4.8
  DEPTH=        .3        .7        .0        .1       1.8       1.6        .7        .2        .4       1.1

1490 NH CARD USED
*SECNO 222.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.92


3470 ENCROACHMENT STATIONS=     9877.3   12450.0  TYPE=       1  TARGET=      2572.700
   222.000      3.92     36.92       .00       .00     36.96       .04      1.83       .00     36.30
    2270.0      60.0     101.2    2108.8      68.9      56.5    1261.7     297.1     238.6     36.30
      1.45       .87      1.79      1.67      .045      .045      .054      .000     33.00   9883.50
   .001172      570.      582.      620.         6         0         0       .00    813.63  12205.55
   SECNO    DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q        QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME     VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE    XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


FLOW DISTRIBUTION FOR SECNO=    222.00          CWSEL=     36.92

STA=    9884.    9987.   10015.   10735.   10801.   11083.   11107.   11144.   11161.   11576.   11777.   11808.   12206.
  PER Q=      2.6      4.5     18.3      3.3      6.2      9.5     13.8      3.9     15.3      8.5     12.7      1.4
   AREA=     68.9     56.5    466.0    101.0     74.1     82.9    124.4     42.2    133.4     78.9    109.5     49.3
    VEL=       .9      1.8       .9       .8      1.9      2.6      2.5      2.1      2.6      2.4      2.6       .6
  DEPTH=       .7      2.1       .6      1.5       .3      3.5      3.3      2.5       .3       .4      3.6       .1

1490 NH CARD USED
*SECNO 224.000

3265 DIVIDED FLOW


3470 ENCROACHMENT STATIONS=    10000.0   14144.7  TYPE=       1  TARGET=      4144.700
        BROKAW RD
   224.000     3.18     37.08       .00       .00     37.11       .04       .16       .00 100000.00
    2270.0       .0      84.9    2185.1        .0      67.5    1385.4     300.5     241.6     35.80
      1.47      .00      1.26      1.58      .000      .045      .048      .000     33.90  10011.36
   .001917     193.      193.      100.         3         0         0       .00   1589.92  12178.35


FLOW DISTRIBUTION FOR SECNO=    224.00          CWSEL=     37.08

STA=   10011.   10095.   10444.   10820.   11073.   11122.   11160.   11173.   11425.   11518.   11583.   11763.   11800.
  PER Q=      3.7     15.3      5.7      4.0     12.3     15.9      4.0      5.4     10.7     11.9      4.3      3.0
   AREA=     67.5    271.9    213.0     81.4    112.0    116.6     33.6     86.4    132.5    122.3     90.8     42.8
    VEL=      1.3      1.3       .6      1.1      2.5      3.1      2.7      1.4      1.8      2.2      1.1      1.6
  DEPTH=       .8       .8       .6       .3      2.3      3.1      2.5       .3      1.4      1.9       .5      1.1

STA=   11800.   12131.   12178.
  PER Q=      3.4       .6
   AREA=     64.5     17.7
    VEL=      1.2       .7
  DEPTH=       .2       .4

1490 NH CARD USED
*SECNO 226.000

3265 DIVIDED FLOW
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    SECNO     DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
    Q         QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
    TIME      VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
    SLOPE     XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


3470 ENCROACHMENT STATIONS=    10000.0   12250.0  TYPE=      1  TARGET=     2250.000
   226.000       2.32      37.22       .00       .00     37.28       .06       .16       .00 100000.00
    2270.0         .0       13.5    2256.5        .0      59.5    1148.9     302.5     244.2     37.10
      1.48        .00        .23      1.96      .000      .090      .046      .000     34.90  10041.72
   .003303        60.        66.       66.         2         0         0       .00   1835.52  12250.00


FLOW DISTRIBUTION FOR SECNO=    226.00          CWSEL=     37.22

STA=   10042.   10550.   11183.   11331.   11520.   11772.   12063.   12119.   12250.
  PER Q=      .6      16.6     36.6     12.2      9.4     17.4      4.1      3.1
   AREA=    59.5     199.2    283.6    160.7    155.6    237.8     51.8     60.0
    VEL=      .2       1.9      2.9      1.7      1.4      1.7      1.8      1.2
  DEPTH=      .1        .3      1.9       .8       .6       .8       .9       .5

1490 NH CARD USED
*SECNO 228.000

3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  3.77


3470 ENCROACHMENT STATIONS=    10000.0   12320.0  TYPE=      1  TARGET=     2320.000
   228.000       2.81      37.31       .00       .00     37.32       .01       .04       .00 100000.00
    2270.0         .0       20.5    2249.5        .0      98.1    3390.2     306.2     247.3     36.00
      1.51        .00        .21       .66      .000      .090      .050      .000     34.50  10034.98
   .000233        67.        53.       69.         2         0         0       .00   2285.02  12320.00


FLOW DISTRIBUTION FOR SECNO=    228.00          CWSEL=     37.31

STA=   10035.   10165.   10437.   10726.   11105.   11154.   11197.   11252.   11388.   11511.   11614.   11820.   11917.
  PER Q=      .9       5.2      3.0      3.5      3.6      4.6      4.3      9.7      8.3      8.0     17.1      7.8
   AREA=    98.1     376.5    274.3    311.6    100.4    110.3    115.8    274.6    240.3    218.0    454.4    210.2
    VEL=      .2        .3       .3       .3       .8       .9       .8       .8       .8       .8       .9       .8
  DEPTH=      .8       1.4       .9       .8      2.0      2.6      2.1      2.0      2.0      2.1      2.2      2.2

STA=   11917.   12033.   12112.   12193.   12305.   12320.
  PER Q=     5.5       8.0      7.0      3.4       .2
   AREA=   179.9     196.7    182.2    133.2     11.8
    VEL=      .7        .9       .9       .6       .4
  DEPTH=     1.6       2.5      2.3      1.2       .8
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   SECNO      DEPTH     CWSEL     CRIWS     WSELK     EG        HV        HL        OLOSS     L-BANK ELEV
   Q          QLOB      QCH       QROB      ALOB      ACH       AROB      VOL       TWA       R-BANK ELEV
   TIME       VLOB      VCH       VROB      XNL       XNCH      XNR       WTN       ELMIN     SSTA
   SLOPE      XLOBL     XLCH      XLOBR     ITRIAL    IDC       ICONT     CORAR     TOPWID    ENDST


1490 NH CARD USED
*SECNO 236.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =   .19


3470 ENCROACHMENT STATIONS=    10000.0   11730.0  TYPE=      1  TARGET=     1730.000
    236.000       2.71     37.81       .00       .00     37.86       .06       .55       .00 100000.00
     2270.0         .0      48.7    2221.3        .0      44.2    1131.9     350.5     279.3     36.60
       1.63        .00      1.10      1.96      .000      .090      .072      .000     35.10  10010.19
    .006225       100.      100.      850.         2         0         0       .00   1154.88  11694.20


FLOW DISTRIBUTION FOR SECNO=    236.00          CWSEL=     37.81

STA=   10010.   10067.   10107.   10217.   10313.   10366.   10686.   10883.   11049.   11197.   11478.   11515.   11534.
  PER Q=      2.1      3.1     18.5     16.1      3.1      3.4      3.5      7.5      3.7      4.0     10.4      4.1
   AREA=     44.2     46.7    209.9    182.1     52.1     59.5     93.8    127.1     68.9     41.2     63.3     27.7
    VEL=      1.1      1.5      2.0      2.0      1.3      1.3       .8      1.3      1.2      2.2      3.7      3.3
  DEPTH=       .8      1.2      1.9      1.9      1.0       .2       .5       .8       .5       .1      1.7      1.5

STA=   11534.   11559.   11639.   11693.   11694.
  PER Q=      5.3      8.4      6.8       .0
   AREA=     36.3     66.1     57.2       .2
    VEL=      3.3      2.9      2.7       .7
  DEPTH=      1.5       .8      1.1       .2

*SECNO 240.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.54


3470 ENCROACHMENT STATIONS=    10579.1   12539.4  TYPE=      1  TARGET=     1960.301
    240.000       3.36     39.16       .00       .00     39.21       .06      1.35       .00     40.60
     2270.0         .0      95.3    2174.7        .0      38.5    1158.5     360.0     288.9     38.90
       1.68        .00      2.48      1.88      .000      .045      .045      .000     35.80  10643.96
    .002634       650.      300.      350.         2         0         0       .00   1250.67  12356.37
  SECNO      DEPTH      CWSEL      CRIWS      WSELK      EG         HV         HL         OLOSS      L-BANK ELEV
  Q          QLOB       QCH        QROB       ALOB       ACH        AROB       VOL        TWA        R-BANK ELEV
  TIME       VLOB       VCH        VROB       XNL        XNCH       XNR        WTN        ELMIN      SSTA
  SLOPE      XLOBL      XLCH       XLOBR      ITRIAL     IDC        ICONT      CORAR      TOPWID     ENDST


FLOW DISTRIBUTION FOR SECNO=    240.00          CWSEL=     39.16

STA=   10644.   10665.   10714.   10784.   11227.   11671.   11789.   11805.   11823.   11844.   12347.   12356.
  PER Q=      4.2      4.3     12.0     48.5      8.1      7.9      3.4      4.2      3.3      4.0       .2
   AREA=     38.5     52.2    115.1    557.1    190.5     72.8     29.7     35.6     32.8     68.2      4.4
    VEL=      2.5      1.8      2.4      2.0      1.0      2.5      2.6      2.7      2.3      1.3      1.1
  DEPTH=      1.9      1.1      1.7      1.3       .4       .6      1.9      2.0      1.6       .1       .4

1490 NH CARD USED
*SECNO 242.000

3265 DIVIDED FLOW


3302 WARNING:  CONVEYANCE CHANGE OUTSIDE OF ACCEPTABLE RANGE,  KRATIO =  1.47


3470 ENCROACHMENT STATIONS=     10514.7   12112.6  TYPE=       1  TARGET=      1597.899
   242.000       3.88      39.88        .00        .00      39.89        .02        .68        .00      43.30
    2270.0         .0       95.8     2174.2         .0       98.1     2161.6      375.6      299.8      38.60
      1.79        .00        .98       1.01       .000       .090       .082       .000      36.00   10643.03
   .001226       250.       250.       400.          3          0          0        .00    1152.93   12092.43


FLOW DISTRIBUTION FOR SECNO=    242.00          CWSEL=     39.88

STA=   10643.   10687.   10744.   10918.   11149.   11462.   11647.   11713.   12085.   12092.
  PER Q=      4.2      3.2     13.0     24.1     26.9     11.2      9.1      7.9       .4
   AREA=     98.1     90.5    329.9    538.3    649.2    311.0    120.5    115.0      7.3
    VEL=      1.0       .8       .9      1.0       .9       .8      1.7      1.6      1.2
  DEPTH=      2.2      1.6      1.9      2.3      2.1      1.7      1.8       .3      1.0
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                                                                THIS RUN EXECUTED 26JUN95    15:03:12
 *************************************
  HEC-2 WATER SURFACE PROFILES

  Version   4.6.2;  May 1991
 *************************************


 NOTE- ASTERISK (*) AT LEFT OF CROSS-SECTION NUMBER INDICATES MESSAGE IN SUMMARY OF ERRORS LIST


 50% BLOCKED CONDITIONS -

 SUMMARY PRINTOUT


         SECNO      XLCH        Q      STENCL      SSTA     STCHL     STCHR     ENDST    STENCR    TOPWID     10*KS        EG

       188.000       .00   1293.00   8275.00   8275.00   9983.10  10016.30  10282.30  11361.10   1062.22       .74     20.84

 *     190.000    469.20   1270.00   8400.00   8451.22   9984.20  10013.10  10863.44  11284.10    438.57    256.42     22.31

 *     192.000    181.20   1270.00   8000.00   8465.73   9921.30  10067.50  11239.01  11241.30    540.58     84.72     25.06

 *     194.000     73.40   1270.00   6570.50   8008.72   9910.80  10345.60  11227.60  11227.60    855.85    189.34     26.00

 *     196.000     85.80   1270.00   6702.10   7345.62   9902.30  10080.80  11308.60  11308.60    951.18     26.35     26.50

 *     198.000    213.00   1270.00   6385.60   6400.75   9988.40  10014.00  11350.42  11363.20   1896.53      1.37     26.62

 *     200.000    386.30   2270.00   6669.00   6673.46   9988.90  10016.10  12835.15  12850.70   3040.68      1.97     26.69

       202.000    425.80   2270.00   6817.60   6875.23   9985.00  10012.60  12244.10  13600.00   3496.14      2.46     26.80

 *     204.000    484.00   2270.00   6923.30   7715.45   9986.60  10012.70  11702.78  11703.00   2015.32    494.28     27.30

 *     206.000    704.30   2270.00   6902.40   7824.62   9985.50  10015.60  10065.39  10400.00   2240.77     13.74     30.02

       208.000    300.00   2270.00   7187.10   7529.87   9986.50  10014.20   9930.00   9930.00   2400.13     21.34     30.41

       210.000    174.80   2270.00   7377.90   7413.49   9985.90  10014.10   9970.00   9970.00   2528.63     16.73     30.79

       212.000     68.90   2270.00   7618.70   7618.70   9937.10  10080.00   9670.00   9670.00   2051.30     11.35     30.89

       214.000     61.80   2270.00   7547.10   7611.18   9688.10  10121.70   9629.00   9629.00   2017.82      9.56     30.94

       216.000     64.40   2270.00   7687.00   7687.00   9939.40  10078.60   9570.00   9570.00   1883.00     11.50     31.00

       218.000    181.60   2270.00   7687.00   7687.00   9991.00  10013.80   9800.00   9800.00   2089.83     11.65     31.12

 *     220.000   1400.80   2270.00   9169.40   9169.40  10000.00  10127.20  11500.00  11500.00    454.76    180.22     35.13
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      SECNO      XLCH       Q      STENCL     SSTA      STCHL     STCHR     ENDST    STENCR    TOPWID     10*KS      EG

*    222.000    581.50   2270.00   9877.30   9883.50   9987.30  10014.70  12205.55  12450.00    813.63    11.72    36.96

     224.000    193.00   2270.00  10000.00  10011.36   9958.20  10094.50  12178.35  14144.70   1589.92    19.17    37.11

     226.000     65.90   2270.00  10000.00  10041.72   9952.40  10549.70  12250.00  12250.00   1835.52    33.03    37.28

*    228.000     53.30   2270.00  10000.00  10034.98   9927.90  10165.00  12320.00  12320.00   2285.02     2.33    37.32

*    236.000    100.00   2270.00  10000.00  10010.19   9943.70  10067.20  11694.20  11730.00   1154.88    62.25    37.86

*    240.000    300.00   2270.00  10579.10  10643.96  10640.50  10664.60  12356.37  12539.40   1250.67    26.34    39.21

*    242.000    250.00   2270.00  10514.70  10643.03  10624.90  10687.20  12092.43  12112.60   1152.93    12.26    39.89
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50% BLOCKED CONDITIONS -

SUMMARY PRINTOUT


     SECNO      XLCH        Q       VCH     AREA       VOL     ELMIN    DEPTH    DIFEG      EG     DIFWSP   DIFWSX

    188.000      .00    1293.00     .14   2314.07      .00    15.60     5.24      .00     20.84      .00      .00

*   190.000   469.20    1270.00     .00    292.64    15.02    20.20     1.80      .00     22.31      .00     1.16

*   192.000   181.20    1270.00     .00    424.04    16.68    23.10     1.80      .00     25.06      .00     2.90

*   194.000    73.40    1270.00     .00    412.12    17.42    24.30     1.55      .00     26.00      .00      .95

*   196.000    85.80    1270.00    1.35    725.38    18.56    23.80     2.65      .00     26.50      .00      .59

*   198.000   213.00    1270.00     .49   2828.48    32.72    23.10     3.52      .00     26.62      .00      .17

*   200.000   386.30    2270.00     .15   4575.10    69.28    22.80     3.89      .00     26.69      .00      .07

    202.000   425.80    2270.00     .00   4438.21   118.06    23.70     3.09      .00     26.80      .00      .11

*   204.000   484.00    2270.00     .00    905.67   149.99    25.20     1.93      .00     27.30      .00      .33

*   206.000   704.30    2270.00    1.50   2865.34   178.85    27.80     2.21      .00     30.02      .00     2.88

    208.000   300.00    2270.00     .00   2561.40   193.35    28.70     1.70      .00     30.41      .00      .39

    210.000   174.80    2270.00     .00   2855.89   205.96    28.70     2.08      .00     30.79      .00      .38

    212.000    68.90    2270.00     .00   3012.01   210.68    28.60     2.28      .00     30.89      .00      .10

    214.000    61.80    2270.00     .00   3107.46   214.19    27.90     3.03      .00     30.94      .00      .05

    216.000    64.40    2270.00     .00   2852.29   218.29    28.10     2.89      .00     31.00      .00      .06

    218.000   181.60    2270.00     .00   3011.47   225.03    28.10     3.01      .00     31.12      .00      .12

*   220.000  1400.80    2270.00     .00    463.84   284.01    31.60     3.14      .00     35.13      .00     3.63

*   222.000   581.50    2270.00    1.79   1387.04   297.05    33.00     3.92      .00     36.96      .00     2.18

    224.000   193.00    2270.00    1.26   1452.95   300.52    33.90     3.18      .00     37.11      .00      .16

    226.000    65.90    2270.00     .23   1208.34   302.53    34.90     2.32      .00     37.28      .00      .14

*   228.000    53.30    2270.00     .21   3488.32   306.20    34.50     2.81      .00     37.32      .00      .09

*   236.000   100.00    2270.00    1.10   1176.14   350.49    35.10     2.71      .00     37.86      .00      .50

*   240.000   300.00    2270.00    2.48   1196.98   359.97    35.80     3.36      .00     39.21      .00     1.35

*   242.000   250.00    2270.00     .98   2259.63   375.61    36.00     3.88      .00     39.89      .00      .72
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 SUMMARY OF ERRORS AND SPECIAL NOTES


CAUTION SECNO=     190.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     190.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     190.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=     192.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     194.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     196.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     198.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     200.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

CAUTION SECNO=     204.000  PROFILE=  1  CRITICAL DEPTH ASSUMED
CAUTION SECNO=     204.000  PROFILE=  1  PROBABLE MINIMUM SPECIFIC ENERGY
CAUTION SECNO=     204.000  PROFILE=  1  20 TRIALS ATTEMPTED TO BALANCE WSEL

WARNING SECNO=     206.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     220.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     222.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     228.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     236.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     240.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE

WARNING SECNO=     242.000  PROFILE=  1  CONVEYANCE CHANGE OUTSIDE ACCEPTABLE RANGE
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DISK

COYOTE CREEK FEMA LOMR

HEC-2 FILES

CHANNEL HYDRAULIC ANALYSIS

	FILE NAME	STATION/REACH
REACH A	**COYA**	SPRR TO STA. 0+00
REACH 1A	**COY1A**	District STA. 0+00 to 51+50 (Begin bypass)
REACH 1A	**COY1B**	DISTRICT STA. 51+50 to 121+90 (End bypass)

DISTRICT STA.121+90 = FEMA STA. 500+00

REACH 2A	**COY2A**	FEMA STA. 500+00 to 571+00
REACH 2B	**COY2B**	FEMA STA. 571+00 to 595+00 (D/S Alviso Br.)
REACH 3	**COY3A**	FEMA STA. 596+50 TO 628+00 (Begin bypass)
	COY3BP	FEMA STA. 628+00 TO 727+00
	COY3CH	FEMA STA. 628+00 TO 727+00 (End bypass)
	COY3E	FEMA STA. 727+00 TO 747+00
REACH 1-3	**COY2**	EXISTING FIS MODEL

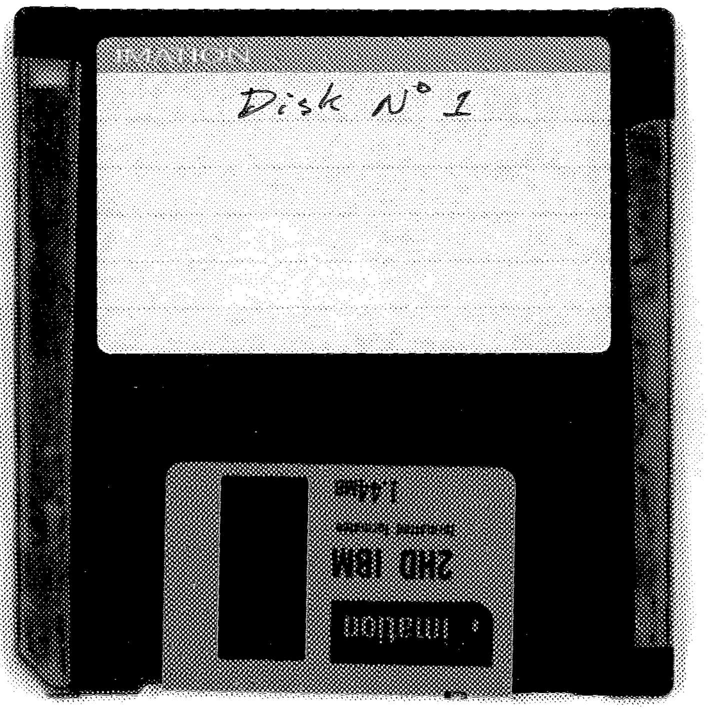
INTERNAL DRAINAGE STUDY

POST1.DAT.OUT	POST PROJECT
POST2.*	"
POST3.*	"
GUAD06.OUT	DUPLICATE EFFECTIVE FIS
NSJ1A50.OUT	PRE PROJECT(NOLTE STUDY)
NSJ1B50	
NSJ1C50	

Coyote Creek - LOMR

Disk No 1

COYA
COY1A
COY1B
COY2A
COY2B
COY3A
COY3CH
COY3BP
COY3E
COY2

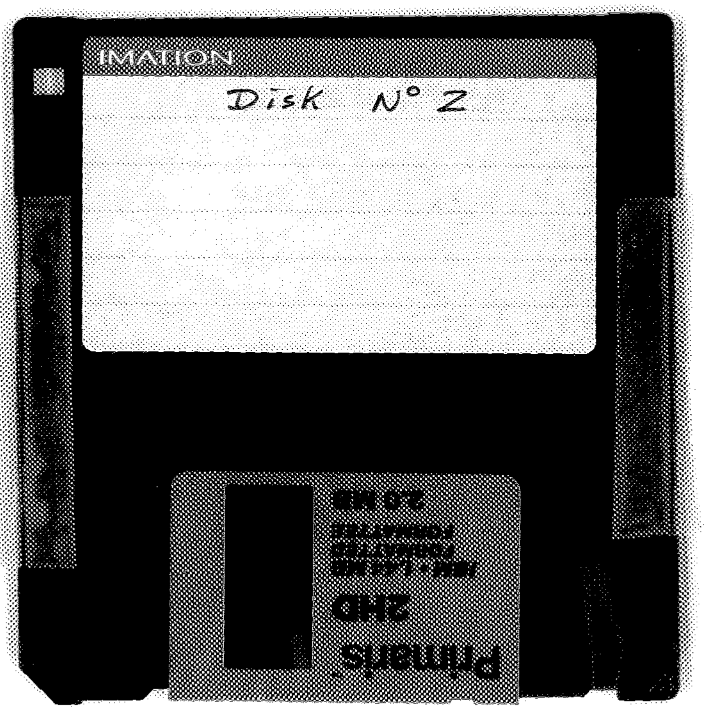


Coyote Creek - LOMR

Disk No 2

(Interior Drainage Study)

POST1.DAT.OUT	Post Project
POST2.*	
POST3.*	
GUAD06.OUT	Duplicate Effective FIS
NSJ1A50.OUT	Pre Project (Nolte Study)
NSJ1B50.OUT	
NSJ1C50.OUT	



COYOTE CREEK FEMA LOMR

HEC-2 FILES

CHANNEL HYDRAULIC ANALYSIS

	FILE NAME	STATION/REACH
REACH A	**COYA**	SPRR TO STA. 0+00
REACH 1A	**COY1A**	District STA. 0+00 to 51+50 (Begin bypass)
REACH 1A	**COY1B**	DISTRICT STA. 51+50 to 121+90 (End bypass)

DISTRICT STA.121+90 = FEMA STA. 500+00

	FILE NAME	STATION/REACH
REACH 2A	**COY2A**	FEMA STA. 500+00 to 571+00
REACH 2B	**COY2B**	FEMA STA. 571+00 to 595+00 (D/S Alviso Br.)
REACH 3	**COY3A**	FEMA STA. 596+50 TO 628+00 (Begin bypass)
	COY3BP	FEMA STA. 628+00 TO 727+00
	COY3CH	FEMA STA. 628+00 TO 727+00 (End bypass)
	COY3E	FEMA STA. 727+00 TO 747+00
REACH 1-3	**COY2**	EXISTING FIS MODEL

INTERNAL DRAINAGE STUDY

POST1.DAT.OUT	POST PROJECT
POST2.*	"
POST3.*	"
GUAD06.OUT	DUPLICATE EFFECTIVE FIS
NSJ1A50.OUT	PRE PROJECT(NOLTE STUDY)
NSJ1B50	
NSJ1C50	

FEDERAL EMERGENCY MANAGEMENT AGENCY
RIVERINE HYDRAULIC ANALYSIS SUMMARY (FORM 4)

SANTA CLARA VALLEY WATER DISTRICT
COYOTE CREEK FLOOD CONTROL PROJECT

This summarizes the methodology used for the hydraulic analyses for the channel improvements on Coyote Creek between the San Francisco Bay and Montague Expressway in the cities of Milpitas and San Jose, California. These analyses form the basis for revising effective FIRM Nos. 060344-0001,0003(effective date 7/4/88) and 060349-0006,0008, 0013(effective date 12/16/88) based on the completion of the Coyote Creek Flood Control Project. Project levees now contain the one-percent discharge within the creek channel, so there are no longer overflows to the east and west of Coyote Creek downstream of Montague Expressway. The HEC-2 output summary attached for FORM 8 indicate all levees meet the FEMA's minimum freeboard requirements.

The hydraulic modeling at the very downstream reaches (HEC-2 files COYA and COY1A), beginning from the Southern Pacific Railroad crossing to the end of bypass channel, were performed using different starting water surfaces. One was performed using the highest estimated tide (HET) at ten-percent Q, the other was using the mean higher high water (MHHW) at one-percent Q. The resulted higher water surface profiles became the control for the levee design upstream.

The bypass channel in Reach 1 will carry floodwater out between Newby Island and the San Francisco Bay and will outlet through the Natural Wildlife Refuge. Since the existing Coyote Creek in Reach 1 can only carry about 2000 cfs, streamflows greater than this amount will overflow into the bypass. However, in our hydraulic analyses we have conservatively assumed that the bypass carries the entire 100-year flow, 12400 cfs.

Reaches 2A & 2B (HEC-2 files COY2A & 2B) consist of parallel overflow earthen channels and levees. The low flow will be contained in the existing channel bottom. Earthen levees constructed on both sides of the channel provide one-percent capacity. The earthen channel narrows into a concrete-lined section under the existing Highway 237 bridge. The HEC-2 runs were performed using Q = 12400 cfs

Reaches 3A and 3B (HEC-2 files COY3A, COY3CH, COY3BP, and COY3E) begin upstream of Highway 237 and extend to upstream of Montague Expressway. They consist of parallel earthen bypass channel and levees. The earthen channel and levees extend through upstream and connect with a concrete-lined section under the existing Montague Expressway. The HEC-2 runs were performed using Q = 12400 cfs.

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